SmartCitiesCouncil
PROJECTACTIVATOR

2019 Smart Cities Council Readiness Challenge

Submission deadline: February 15th, 2019 08:00

Western New Mexico University

Section: Welcome, Instructions and Help

Introduction

Welcome to the 2019 Smart Cities Readiness Challenge application.

The challenge is open to North American cities, towns, regions, states, transportation authorities, utility-city and university-city collaborations, and even innovation districts and smart developments.

By applying, you are taking an important step towards a more livable, workable, sustainable future. First, you will be answering the questions every community should ask itself before it embarks on a smart cities journey. Second, your information will now be more valuable to you because it will be stored in the Smart Cities Project Activator, a collaborative tool that will help you strengthen your plans and align stakeholders.

This application stores your information as you go along. Using your login and password, you can come and go as many times as needed. Your application isn't final until you submit it. Once you do hit Submit, you can still return to this site as often as you like to review and download your information.

Important Note: Not all questions will count towards your final score. Some of the requested information is simply to give the judges context so they can understand how your plans fit into your community's long-term needs and aspirations. The application clearly notes which sections are for judging and which are simply for context.

Please read the Instructions for more information on how the Readiness Challenge is scored. As you will read, you will not be judged on your past accomplishments or current state of "readiness." Rather, you will be scored on the quality of your future plans and projects you wish to undertake.

Use the arrows at the top of the page and the [next] and [back] buttons at the bottom of the page to navigate to the different pages of the section.

I have read the introduction.

☑ Yes

Benefits of the Readiness Challenge

At least five applicants will be named 2019 Smart Cities Council Readiness Challenge Winners. They will receive a full year of hands-on mentoring, outcome-oriented stakeholder workshops, smart city roadmap support, and help scoping projects and accessing financing or funding through the Smart Cities Council and our partner network.

In reality, however, everyone wins. Just the process of applying for the Smart Cities Readiness Challenge will help you advance your smart city program and attract expertise and financing for your projects. The application process is designed to help you strengthen stakeholder ecosystems, build consensus and more clearly define your initiatives.

And even after submitting your application, you can use the Smart Cities Project Activator free through December 2019. This online tool for gathering, storing, organizing, analyzing, managing, and (optionally) sharing data about smart city projects, will help sustain and grow the momentum gained through your application process. We will be unlocking additional Activator features and providing associated training in the weeks ahead.

Getting Started

Watch this video to get overall help in understanding how the application works.

Click the small box in the bottom right of the video to watch in full screen mode.
You can click the gear in the same area and watch the video in 1080p for best resolution.

Instructions

Key Dates:

- October 18, 2018: Application goes live.
- February 15, 2019: Application closes.
- Early March: Finalist announcement
- Mid-Late March: Finalist interviews
- April 16: Winner announcement at Smart Cities Week San Diego
- May – December 2019: Readiness Workshops in the winning cities.

How to proceed. You may proceed through the application in any order. You can bring in other people to help you answer and review your work. Your work will be saved as you go along. You may leave questions blank and return to them later. You may skip questions altogether – there is no requirement to answer every question to enter or to win. However, the more questions you answer, the greater your scoring opportunities.

Scoring

Entries will be judged on the following criteria:

Impact: The Applicant's projects will provide significant benefits to a large group of people. If the project is a pilot, the Applicant has demonstrated how it can later be scaled and replicated.

Cross-cutting and collaborative: The Applicant has involved multiple city departments and is looking for synergistic ways to share infrastructure and costs. And the Applicant has built a strong process for engaging external stakeholders.

Inclusiveness: The Applicant is making a bona-fide effort to reach vulnerable and underserved populations and to use technology as a force for social good.

Sustainable: The Applicant's projects incorporate the principles of environmental, economic, and social sustainability.

Extra credit opportunities. You have many ways to increase your total score, such as completing unrequired questions that have scores. For instance, you can receive extra points by supplying letters of support, as explained at the end of this application.

Benefits and Features of the Smart Cities Project Activator

The Smart Cities Project Activator is a powerful new tool delivered through an online portal that helps communities like yours reach consensus faster, scope projects quickly and, in the future, identify financing and funding options. And, as part of the Smart Cities Council's proven Readiness Program, it helps you develop truly cross-cutting solutions that deliver lasting benefits across your community. People from across your community can work together in a shared software environment that allows you to improve program collaboration and analysis.

With web-based visual models and dashboards using principles developed in the Council's Readiness Program, you can see the impacts and dependencies across departments and stakeholder groups. These different groups can work together, seeing the results of their shared decisions in real-time, driving consensus up to 30% faster and developing stronger, more cross-cutting solutions.

Use other Activator templates to define your smart cities vision and goals, outline new business models and revenue streams, and create project blueprints. You can even expand the collaboration beyond your community to see what other cities are working on or access advice from industry or financing experts.

I have read the instructions

☑ Yes

I have read the Benefits of the Readiness Challenge

☑ Yes

I have read the Benefits and Features of the Smart Cities Project Activator

☑ Yes

I have watched the Getting Started Video

☑ Yes

Make Your Answers Better

Watch this video to learn how to understand the questions and improve your answers.
Click the small box in the bottom right of the video to watch in full screen mode.
You can click the gear in the same area and watch the video in 1080p for best resolution.

I have watched the Make Your Answers Better Video

☑ Yes

Administration: Users and Your Organization

If you are the Administrator of your account watching this video will help you learn how to invite people to your account and how to update your organization's profile and upload a logo.

Click the small box in the bottom right of the video to watch in full screen mode.
You can click the gear in the same area and watch the video in 1080p for best resolution.

Section: Information and Communications Technology (ICT)

ICT Section Instructions

- This section will **NOT** be scored, but it will provide important context for the judges about your use of enabling smart city technologies and associated processes.
- Questions labeled with a red * are required questions.
- Use the arrows at the top of the page and the [next] and [back] buttons at the bottom of the page to navigate to the different pages of the section.

How many employees are responsible for Information and Communications Technology (ICT)?

- 0
- 1 to 4
- 5 to 9
- 10 to 19
- ☑ 20+

KR: Information and communications technology (ICT) enable cities to deliver on their smart city promises.

ICT enables a smart city to provide its citizens with a livable, workable and sustainable environment to live in. A smart city collects information about itself through sensors, other devices and existing systems. Next, it communicates that data using wired or wireless networks. Then it analyzes that data to understand what's happening now and what's likely to happen next.

How will you implement new technologies so they can be shared with multiple departments and agencies?

The US-MX Smart Towns Consortium core higher-education consortium members -- Universidad Autonoma Chihuahua (UACH), Arizona State University (ASU), University of Texas-El Paso, and Western New Mexico University (WNMU) -- each bring specialized assets to this ambitious project. Our focus is on a USA-Mexico borderlands region of “smart towns” anchored by established and aspiring smart cities (Chihuahua, MX , Phoenix, AZ, and El Paso, TX, and to be added: Tucson, AZ; Albuquerque, NM -- a 2018 Smart Cities Council winner; Las Cruces, NM; Juarez, MX). This effort is endorsed by the Town of Silver City, the State of New Mexico, City of Albuquerque, and endorsement and participation will be sought during the grant period from the respective cities and city initiatives as these relate to our rural community focus. Freeport McMoRan Inc (FMI) provides the facilitation to 11 communities that make up the Leadership for Sustainable Communities Initiative spanning AZ, NM, and CO. Additionally other regional groups offer access to data and communities including National Center for Frontier Communities, Southwest New Mexico Council of Governments, and the State of New Mexico. Other stakeholders herein provide expertise in specific domains including the Jozef Stefan Institute (JSI) of Slovenia which will provide specific recommendations regarding a small town, regional network of “smart communities.” Google’s Jaime Casap will provide guidance with respect to technological innovations for new education models together with Otto Khera and other instructional technology experts and educators on this proposal. OmniOpti of Slovenia will provide certain guidance (if allowable under the grant) relating to autonomous vehicles. Leading researchers from ASU, UTEP, UACH, JSI, and others who will join later, will offer domain-specific research methods and frameworks relating to the goal of collecting, analyzing, and publishing data findings on the needs of rural communities in this region regarding smart technologies. Our main challenge in this grant iteration will be sharing data that reflects the accurate priorities across the region and rural locations in the three primary areas of our focus: economic development, education and workforce development, and mobilities/transportation. Sharing this initial data with the intent of defining a robust data sharing framework across the the region and network locations of towns and cities in this effort will involve less technical specifications at first, and will be a set of cloud data services that are secure and requiring minimal member training. The preliminary standard for sharing is Google Apps platform together with asynchronous communications and synchronous communications including videoconferencing (Zoom). We will be relying heavily upon the Smart Cities Council (SCC) platform and support structure as well. Together, these tools and platforms will be used for collaboration toward defining the shared data and technological standards of the technologies and related data to be researched intensively under the second iteration of this program, supported by a grant to the National Science Foundation in the U.S. and Conacyt in Mexico. Basic

communications technologies will be used to determine and define the data collection and analysis tools and standards, whether Qualtrics for surveys, SPSS for regression analyses, or Tableau for visual data communications. Technologies to be shared will be identified and applied on the basis of need as identified by the consortium members and respective researchers during the program support period leading up to the goal: A completed design, project plan, and budget in accordance with the National Science Foundation's "Smart & Connected Communities" grant opportunity for submission in January 2020. Technologies of most importance are broadband data connectivity connecting member towns and locations, database/data sharing platforms, transportation and mobilities technologies, and education resource technologies (data analytics, research data, and online instruction).

KR: Privacy policies encourage citizens to trust cities with their personal data.

Unless citizens know their personal data is safe they will be reluctant to share it, even if that data is a critical part of an improvement project. There are steps cities can take to secure the data they collect and reassure citizens that their privacy is protected. If a smart city project requires the collection of personal data, cities need to clearly demonstrate its value to the community.

Do you have an organization-wide privacy policy?

- (•) Yes
- ( ) No

KR: A citywide data architecture is essential to optimize how your information is used.

Digital government solutions need data - data sources that are sometimes locked away, that don't talk to each other, or that are just being collected for the first time. Strong smart city leadership vision focuses on the possibilities of new data-driven solutions - or more importantly sees the missed opportunities of not using data - when looking to use innovative approaches to meet its community challenges.

Describe your progress in sharing data between departments or agencies.

Yes, IES-City Framework (IES-City). To encourage international interoperability, and considering the international, regional, rural scope of this project, the organizers seek to focus on the IEEE-endorsed IES-City Framework, developed by the National Institute of Standards and Technology (NIST) of the U.S. Department of Commerce . The IES-City Framework is the outcome of an open, international public working group setting out to reduce the high cost of application integration via technical analyses of existing smart-city applications and architectures. The IES-City Framework documents the findings will provide valuable tools that are based on the findings and that can lower barriers to an expanded smart city marketplace, including in a rural context. This is the most common and usable standard for our purposes. According to IES-City standards providers, three primary barriers exist that inhibit widespread deployment of effective, powerful smart city solutions: 1. Inadequate information and knowledge transfer: Most smart city deployments are based on custom systems that cannot exchange information with other cities, and therefore, are neither extensible nor cost-effective. 2. Diverse standards: Current architectural standardization efforts have not yet converged. This creates uncertainty among stakeholders. Often there is a lack of consensus on both a common language/taxonomy and smart city architectural principles. The result is that the many groups with smart city interests are likely to generate standards and practices that are divergent, perhaps even contradictory, which would not optimally serve the global smart city community. 3. Poor scalability: A third barrier is the insufficient interoperability and scalability of underlying Internet of Things (IoT), and Cyber-Physical Systems (CPS) technologies that provide the foundation for many smart cities applications. Additional barriers especially in a rural context include lack of resources, lack of clear principles for prioritization, and limited access to the necessary technical expertise and experience. To lower these barriers, NIST and its partners, below, convened this international public working group to compare and distill a consensus language, taxonomy, and framework of common architectural features to enable smart city solutions that meet the needs of modern communities. In terms of best practices, we seek an approach that sets out to: Contribute to scholarship, education and engagement around innovation and the future of cities and regions; Develop evidence-based policies and programs deployed within the urban centers of this region and the respective towns; Provide continuing and professional education to city and town officials on innovation, entrepreneurship and governance; Create opportunities for undergraduate and graduate students to work with multi-disciplinary teams and cross-sectorial teams on real world problems; Build connections between and relationships with urban and regional governments, smart technology industry, and consortium researchers; Serve as living laboratory for the region's own efforts in creating a smart campuses; and Identify scalable, networked solutions to pressing challenges in cities and regions. The Smart Cities IES-City framework and related planning, policies, and best practices represent an aggregation of existing ones among consortium members.

Do you have islands of data to be integrated?

- (•) Yes
- ( ) No

Describe the data that you would like to integrate.

Technical-Functional Architecture: Sensing Layer Interconnecting Layer Data Layer Service Layer Social Dimensions/Architecture: Livability (Transportation, Education) Preservation (Specific to each Location) Revitalization (Economic Development, Education and Workforce Development, Transportation) Sustainability (Resilience - economic vitality, healthcare, emergency preparedness, food security, mobility, education)

KR: Smart cities are built on connected, multi-faceted telecommunications networks.

5G will create the crucial communications links needed to connect billions of smart devices to the massive Internet of Things to produce major productivity enhancements across industries and governments. 5G will also expand into a new area of mission-critical services that will require high reliability, ultra-low latency, strong security and availability.

Describe your progress in telecommunications.

Mention any relevant projects and plans, including, but not limited to, 5G, fiber, high-bandwidth internet, municipal WiFi and citywide connectivity.

Each of the collaboration partners has a unique trajectory of telecommunications and broadband initiatives specific to their context. For WNMU, efforts have focused on connecting to strategically located Gigapops in New Mexico that would bring the Town of Silver City (ToSC) and WNMU to a level comparable to urban locations in the region. Currently WNMU and the ToSC do not enjoy FCC-defined levels of broadband connectivity of speeds at least matching 25 Mbps downstream and 4 Mbps upstream; whereby the Grant County area enjoys an approximate 22 Mbps downstream, and 2.5 Mbps upstream bandwidth. This is a significant limitation in terms of economic development, education and workforce development, and transportation-related communications. WNMU: As such, the CIO of WNMU, Jason Collet, has been engaging this on behalf of WNMU for at least five years through Rural Utilities Services (RUS) broadband infrastructure grants, and as PI for other, related grants such as an NSF Cyber Infrastructure grant (2014). Otto Khera, a chief organizer of this effort, also has engaged WNMU telecommunications infrastructure through a 2001 RUS Telemedicine and Distance Learning grant (PI, $350,000). ASU (Full 2014-2018 IT plan attached in the supporting documents section): ASU has achieved considerable success at creating strategic advantage through the innovative use of information technologies. The tremendous growth of the university, not only in size but in quality, has been accomplished largely through the university's ability to leverage its technology assets, especially the expertise of its people. The previous (2013-2017) ASU IT Strategic Plan identified twenty-four (24) goals across seven (7) main areas – Student Success, IT Infrastructure, Administrative Effectiveness, IT Security, Academic Technology, Research Computing, and Strategic Technology Alliances – and aligns those goals with related ASU Strategic Priorities. The most current annual update (204-2018) indicates adjustments in and revisions to those goals as some are completed; others demand course corrections and development as new goals emerge. The strategy defined in this plan reflects the progress made towards objectives defined in the 2013-2017 IT Strategic Plan, which itself was an update of the previous Plan and contains the assessment of the Chief Information Officer (CIO) who is responsible for the maintenance of this plan. Ultimately, it is the assessment of the CIO that the fundamental strategies defined in the previous strategic plan – in particular, increasing the pace of innovation and doing more with less by focusing on core vs. context – remain valid. But meeting the challenges of the future will require increased agility and effectiveness of decision-making, innovative strategies for delivery of services and support, and an intense focus on continuing to develop those capabilities that have created the strategic advantage the university enjoys. UTEP: The mission of the Telecommunication Infrastructure (TI) Department at the University of Texas at El Paso is to maintain and grow a unified, IP-based network that integrates data, voice, and video/audio communications opening the door to applications that will make the campus community a more efficient and productive learning environment. Strategies: Manage the University's network infrastructure to provide high capacity, transparent, and secure connectivity to all information resources Increase bandwidth connectivity to state and national education and research networks Increase the number of smart classrooms with audio/visual services and video conferencing capabilities Expand the connectivity resources to International educational networks Provide solid and high-speed network infrastructure to the desktop and laboratories research stations Support Online course infrastructure Facilitate Virtual Desktop Infrastructure with fast and reliable connectivity to centralized applications Goals: Network Connectivity Anytime/Anywhere on Campus Reliable and Secure Connectivity to Cloud Computing Full Customer Satisfaction

KR: A top-level citywide IT architecture is critical to consolidating data assets.

Smart cities must set up an open, citywide, service-oriented strategic IT platform where "open" means easy innovation and evolution and "service-oriented" means convenient replicability and scalability. City partners and suppliers are then able to develop a multi-level competitive

landscape and ecosystem that covers the platform, service and application layers. - and better enables data and resource sharing.

Describe your progress towards an open integration (web services) architecture and API management.

City of Phoenix Open Data -- https://www.phoenixopendata.com/ City of El Paso Open Data -- https://data.texas.gov/Business-and-Economy/El-Paso-ISD/9uf3-uuzp Chihuahua City Open Data : OpenData 500 - MX -- http://www.opendata500.com/mx/about/?lan=en City of Albuquerque - ABQ Data is the City of Albuquerque's clearing house for open data. From here, anyone can access raw information related to the City of Albuquerque. https://www.cabq.gov/abq-data ASU-- Open Access Data Resources -- https://libguides.asu.edu/openaccessresources/statistics VIPLE -- ASU VIPLE is a Visual IoT/Robotics Programming Language Environment developed at Arizona State University, in the IoT and Robotics Education Laboratory, directed by Dr. Yinong Chen - http://neptune.fulton.ad.asu.edu/VIPLE/ UTEP--DBOWLizer is a novel framework for the automatic creation/extraction of expressive ontologies from (normalized) relational databases. This approach extracts and accurately represents the information found in a database by examining its composition. Developers anticipate that this work will help to expose the rich content currently stored in thousands of databases in a way that users, in particular scientists, can be more effective in retrieving information that supports their scientific endeavours. http://dbowlizer.cybershare.utep.edu/ UTEP Geology/GIS Database Resources -- https://research.utep.edu/default.aspx?tabid=37229 WNMU -- None. We seek to address this in the course of this grant project. UACH -- Yes. See attached plan. For this project, our architecture is defined in terms of: Technical-Functional Architecture: Sensing Layer Interconnecting Layer Data Layer Service Layer Social Dimensions/Architecture: Livability (Transportation, Education) Preservation (Specific to each Location) Revitalization (Economic Development, Education and Workforce Development, Transportation) Sustainability (Resilience - economic vitality, healthcare, emergency preparedness, food security, mobility, education) We apply the IEEE IoT and Big Data Analytics for Connected Communities framework (Sun, et. al., 2016; Sun & Jara, 2014). Sun, Y., Song, H., Jara, A. J., & Bie, R. (2016). Internet of things and big data analytics for smart and connected communities. IEEE access, 4, 766-773. Sun, Y., & Jara, A. J. (2014). An extensible and active semantic model of information organizing for the Internet of Things. Personal and Ubiquitous Computing, 18(8), 1821-1833.

Section: Governance

Governance Section Instructions

- Governance is all about the people, processes, policies and structures that are critical to the success of your smart city program.
- This section will be scored. If you look at each question you will see a number In the top right corner of the question if there is a point value for that question.
- Questions labeled with a red * are required questions.
- Use the arrows at the top of the page and the [next] and [back] buttons at the bottom of the page to navigate to the different pages of the section.

KR: Develop a disciplined, integrated procurement plan.

A city's procurement plan for smart city technologies should include a disciplined business case that identifies and quantifies costs and benefits over the project lifetime. Secondly, all city departments need to be integrated in the procurement plan to ensure economies of scale, best practices, elimination of redundant purchases and interoperability.

How long does it typically take to complete a project from identification through procurement? [1 Points]

Please select one item from the list.

- Less than 2 years
- [x] 2-4 years
- More than 4 years

KR: Sustainability: a key component of the smart cities mission.

Cities today face numerous serious challenges. Among them are steadily increasing populations, growing stress, aging and inadequate infrastructure, climate change and environmental challenges, growing economic competition between cities and more. Smart cities undertake solutions to those challenges that ensure a sustainable future for their citizens.

Does your organization have a senior decision maker (or a group) accountable for developing and monitoring sustainability initiatives? [2 Points]

- (•) Yes
- ( ) No

Has your organization received any certifications or awards over the past two years? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] We have received no awards
- [ ] Arts and culture
- [ ] Buildings City services
- [x] Community needs
- [ ] Cybersecurity
- [x] Economic development
- [ ] Education Energy

- [ ] Emergency response
- [ ] Environmental Health
- [ ] General (e.g. most livable, top 10 listings)
- [ ] Human services
- [ ] Privacy
- [ ] Public safety
- [x] Social impact
- [ ] Technology (including telecommunications)
- [x] Transportation
- [ ] Waste management
- [ ] Water
- [ ] Other

Does your organization have a dedicated role, such as a Chief Innovation Officer, to direct your smart cities efforts? [5 Points]

- (•) Yes
- ( ) No

KR: Assess your city's performance.

There are a number of standards development organizations that offer a variety of models and techniques for measuring how well cities are performing. Those measurements can provide valuable insights into a city's performance - and keep it on track to meet its targets.

Have you performed any formal assessments or evaluations in the past three years? [3 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Citizen satisfaction or well-being
- [x] Community needs
- [ ] Cybersecurity
- [ ] Energy efficiency
- [ ] Environmental impact
- [ ] Health impact
- [ ] Human rights
- [ ] Information and communications technology
- [ ] Privacy
- [x] Resilience
- [ ] Safety
- [x] Social impact
- [ ] Staff productivity/efficiency
- [x] Transportation/urban mobility

Do you use agile methodologies for rapid planning, prototyping, and delivery of key initiatives? [5 Points]

- (•) Yes
- ( ) No

KR: The first step to becoming a smart city: an organization-wide plan.

Call it a master plan, a framework or a roadmap. The first steps cities should take to become smart cities is to take a high-level view of what they hope to accomplish and how. An organization-wide smart city plan backed up with policies and targets and supported by engaged citizens is central to the success of a city's transformation.

Do you have an organization-wide smart cities framework, plan or set of policies? [5 Points]

- (•) Yes
- ( ) No

Does your organization have a senior decision maker (or group) responsible for resilience issues? [1 Points]

- (•) Yes
- ( ) No

Please select any of the following vehicles you use to gather feedback from the community. [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [x] Canvassing
- [x] Participating in community groups
- [x] Public meetings
- [x] Social media
- [x] Task forces
- [x] Telephone outreach
- [x] Web portal

KR: Policies help shape (and reinforce) cities' smart city visions.

Smart city transformations are complex and it can be easy to get distracted from goals by the minutiae of daily operations and responsibilities. Dedicated policy makers create guidelines that help clarify and reinforce those goals and ensure that decisions, strategies and projects are in line with smart city visions.

Does the City Council (or similar) have an individual or committee designated for smart city topics? [5 Points]

- (•) Yes
- ( ) No

KR: Resilience must be built into smart city master plans.

Extreme weather, seasonal and man-made events and other forces put cities at risk for loss of life, severe economic disruption and infrastructure damage. Energy network resilience is not the only solution cities have at their disposal to mitigate losses and accelerate recovery. However, a resilient energy network is the critical resource cities must have in place to enable responsive, effective loss mitigation and recovery.

Does your organization periodically assess the vulnerability of its assets and infrastructure? [2 Points]

Answer yes if you have assessed your vulnerability to environmental and social shocks and stressors, including historical hazards, natural disasters, man-made disruptions and climate change.

- (•) Yes
- ( ) No

Have you executed (signed) public-private partnerships in the past? [1 Points]

- (•) Yes
- ( ) No

Does your organization have clear, specific, publicly available sustainability objectives? [2 Points]

- (•) Yes
- ( ) No

KR: KPIs and metrics are critical for tracking city performance.

A smart city tracks its successes and failures with key performance indicators and other metrics to determine if it is serving its citizens well and to identify when course corrections are necessary. Technology can help city governments become more "self-aware." However, KPIs and metrics help them understand how they are performing from their citizens' perspective.

Do you have quantitative metrics or key performance indicators in place? [4 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Citizen satisfaction or well-being
- [x] Community needs
- [ ] Cybersecurity
- [ ] Energy efficiency
- [ ] Environmental impact
- [ ] Health impact
- [ ] Human rights
- [ ] Information and communications technology
- [ ] Privacy
- [x] Resilience
- [ ] Safety
- [x] Social impact
- [ ] Staff productivity/efficiency
- [ ] Stakeholder engagement
- [ ] Transportation/urban mobility

What type of staffing do you have to support your smart cities ambitions? [5 Points]

- No defined resources
- Ad hoc teams
- Dedicated program office
- Contingent staffing
- [x] Cross-functional team

Briefly describe key elements or principles of the plan. You can also upload your plan below. [3 Points]

Contribute to scholarship, education and engagement around innovation and the future of cities and regions; Develop evidence-based policies and programs deployed within the urban centers of this region and the respective towns; Provide continuing and professional education to city and town officials on innovation, entrepreneurship and governance; Create opportunities for undergraduate and graduate students to work with multi-disciplinary teams and cross-sectorial teams on real world problems; Build connections between and relationships with urban and regional governments, smart technology industry, and consortium researchers; Serve as living laboratory for the region's own efforts in creating a smart campuses; and Identify scalable, networked solutions to pressing challenges in cities and regions. Planning follows the ASU IT/Smart Cities

Model (attached)

KR: Innovate and collaborate on social issues.

Urban social issues, from homelessness to vulnerable populations, can be difficult to resolve because they can be controversial and further complicated by legal and regulatory requirements. Cities should consider recruiting local tech companies and universities to lend their expertise and resources to help develop policies for pressing social issues. Many have been willing to support city efforts to improve their city's livability.

Does your organization have policies on social issues? [3 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Child labor
- [x] Community development
- [x] Citizen satisfaction
- [ ] Discrimination
- [ ] Employee engagement
- [ ] Forced or compulsory labor
- [ ] Freedom of association
- [x] Gender and diversity
- [x] Health and safety
- [ ] Labor standards and working conditions
- [x] Underserved neighborhoods
- [x] Vulnerable populations
- [x] Overall well-being

Cross-Departmental Framework Plan

Please upload a copy of your plans if you have one. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Uploaded file(s):

- 341901_exhibit_a.pdf

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

What departments are represented on your cross-functional team? [2 Points]

IT Departments across university partners, together with a burgeoning group of respective town and urban center representatives.

Briefly describe your progress on those metrics or indicators. [2 Points]

We seek to address this in the course of the program, drawing from the City of Albuquerque, Phoenix, and El Paso.

Do you have requirements (e.g. policies, guidelines) for public-private partnerships? [1 Points]

- (•) Yes
- ( ) No

KR: A disaster recovery plan and related metrics are essential.

A published plan for resilience and disaster recovery, one that includes metrics, enables cities to monitor and evaluate their preparedness and available assets over time is essential. It also provides a channel to engage and educate citizens in procedures to follow during emergencies, what the city's responses will be and which agencies to contact for specific services.

Does your organization have a published plan for resilience and disaster recovery, including objectives, strategies and metrics (such as key performance indicators)? [2 Points]

- (●) Yes
- ( ) No

KR: Use existing data to monitor sustainability.

In many instances cities already have the data they need to monitor the effectiveness of their sustainability efforts. For example, building energy management systems can significantly reduce energy and water use in a building as well as lower its greenhouse gas emissions - and those technologies collect data cities should be able to use to determine the effectiveness of their energy efficiency and related programs.

Does your organization have a published sustainability plan, including objectives, strategies and metrics (such as key performance indicators)? [2 Points]

- (●) Yes
- ( ) No

KR: Embrace creative partnerships.

Cities don't need to go it alone when embarking on smart city projects. Local businesses, academic institutions, utilities and others can provide expertise and other resources. It's usually in their best interests to do so.

Briefly describe your efforts to build capacity with your current staff, through outside assistance, or a combination of both. [3 Points]

Each of the collaborating partners has a unique set of core competencies (core resources to offer) and specific efforts to build capacities through internal and external resources, and a combination of these. Most of this grant program effort if awarded would be focused on identifying the specific outside resources to match a core focus on a National Science Foundation (NSF) multi-year research grant, combined with implementation of infrastructure from outside assistance.This includes NSF Smart & Connected Communities funding, and NSF Big Ideas funding projects in combination with funding sources described below. For the major urban areas involved in this regional effort -- Phoenix, Tucson, Albuquerque, Denver, El Paso, Juarez, and Chihuahua City -- outside assistance for infrastructure implementations ranges from large federal funding pools such as from the US Department of Transportation, US Department of Education block grants, and the US Economic Development Association -- to name some of the sources of past, present, and future. For Chihuahua City and Juarez, funding relates to the equivalent Mexican federal organizations including Conacyt, the National Infrastructure Plan (NIP), and the Communications and Transport Ministry (SCT). Additionally, a careful review of existing Strategic Alliances for Mexico (SAM) from USAID funding will conducted to determine if there are infrastructure projects relevant to this effort that can be funded through SAM. Still other program funding might originate from other agencies depending upon the existence or non-existence of programs such as the (EPA) Smart Growth Implementation Assistance Program, numerous USDA programs addressing rural community economic development, and grants and external funding from private foundations such as the Bill & Melinda Gates Foundation, the McCune Foundation, and others. Finally, for specifically New Mexico and Western New Mexico University along with New Mexican universities and education institutions joining upon invitation, the State of New Mexico offers different opportunities relating specifically to this program, especially in the domain of education and workforce development (NMPED and NMHED), but also in the domains of economic development (NM Economic Development Department) and transportation (NMDOT).

Please describe your requirements for public-private partnerships? [1 Points]

ASU, UTEP, and UACH have a long history of public-private partnerships. WNMU enjoys a strong partnership with Western New Mexico Communication, Freeport McMoRan, Inc., and other private industry groups.

Briefly describe key elements of the plan for resilience and disaster recovery. [1 Points]

Disaster recovery planning for each institution varies. WNMU follows the New Mexico 2011 Disaster Recovery Plan.

Public-private partnerships documents

Please upload any Public-private partnerships documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

Do you have specific procurement requirements that address environmental, social or governance issues? [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [ ] Business ethics
- [x] Diversity
- [x] Environmental standards
- [x] Health and safety standards
- [ ] Human rights
- [x] Inclusivity
- [x] Local content (requirements to purchase or hire locally)

Please specify the types of funding mechanisms you have previously used to pay for your initiatives. [3 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [ ] Energy efficiency loans
- [x] Federal grants
- [x] General obligation bonds
- [ ] Green bonds
- [ ] Impact fees
- [ ] Pay for performance
- [ ] Philonthropic grants
- [ ] Property tax increase
- [ ] Public-private partnerships
- [ ] Revenue bonds
- [ ] Sales tax increase
- [ ] Social impact bonds
- [x] Structured finance
- [ ] User fees
- [ ] Other

Section: Stakeholder Engagement

Stakeholder Engagement Instructions

- This section, about the stakeholders you would invite to your Smart Cities Readiness workshop, will be scored. Effective smart cities programs bring diverse stakeholders together; this section and your Readiness Workshop, if you are selected for one, recognizes that. Not all groups are required. The points available for each stakeholder group are located next to the group's name.
- Questions labeled with a red * are required questions.
- Use the arrows at the top of the page and the [next] and [back] buttons at the bottom of the page to navigate to the different pages of the section.

KR: City-utility partnerships are essential.

City-utility partnerships are an extremely valuable collaboration. First, because it's about energy and therefore about essential outcomes such as sustainability, efficiency and economic development. Second, because it is perhaps the biggest single opportunity to make smart cities affordable by sharing infrastructure, costs and data.

List the utilities you will invite to a Smart Cities Readiness Workshop (electricity, water, gas). [2 Points]

Phoenix - Salt River Project, Arizona Public Service Utility (APS) Chihuahua City - Hidromedidores, CFE Centro Silver City - Public Service Company of New Mexico (PNM) El Paso - El Paso Electric, El Paso Water Utilities

List the organizations representing residents or neighborhoods you will invite. [1 Points]

National Center for Frontier Communities; Phoenix Community Alliance; Center for Food Security and Sustainability (The Commons/Volunteer Center of Silver City, NM)

List the organizations representing workers you will invite. [1 Points]

National Education Association of New Mexico Arizona Association for Economic Development

List the organizations representing tourism you will invite. [1 Points]

Silver City Arts & Cultural District & Visitor Information Center New Mexico Tourism Department Arizona Office of Tourism Destination El Paso State of Chihuahua| Visit Mexico

List the organizations representing arts and culture you will invite. [1 Points]

Mimbres Regional Arts Council (MRAC) WNMU Office of Cultural Affairs Arizona Latino Arts and Cultural Center (ALAC) Arizona Humanities New Mexico Humanities Council

KR: Work with local sports stadiums.

Stadiums can be a tremendous asset for cities that want to initiate energy conservation and efficiency programs. While they operate intermittently, the facilities typically use tremendous amounts of energy and bring increased traffic to their locations during events. Collaboration

on those two areas alone can be a win for cities.

List the organizations representing sports you will invite (stadiums, sports teams, etc.) [1 Points]

Football: ASU Sun Devils WNMU Mustangs Baseball: Arizona Diamondbacks Soccer: UACH Dorados Fuerza FC Juarez El Paso Chihuahuans

KR: Organizations representing the disadvantaged are stakeholders too.

Local organizations dedicated to helping low-income, disabled, homeless and other disadvantaged residents have a lot to offer cities. They can offer practical insights and advice on policy issues. And many are already doing the heavy lifting through their assistance programs.

List the organizations representing the disadvantaged you will invite (low-income, handicapped, elderly, homeless, etc.) [1 Points]

To be sure, many of the rural communities and people in this region are considered disadvantaged, with over 70% of high school students in Grant County qualifying for free or reduced cost school lunch programs. The State of New Mexico is measured to be the second most impoverished state in the U.S., only behind the State of Mississippi, with a poverty rate by household income of 20.6% of the population. Arizona is ranked at 42 (10th highest poverty rate) at 18.2% poverty rate, and Texas is ranked at 38 (14th highest poverty rate) with a 17.2% poverty rate for its population. The national average is 12.3%. Only Colorado has a poverty rate lower than the national average at 12.1% in 2014 (U.S. Census Bureau). Thus, this project addresses an entire region with extremely high poverty rates. We do intend also to invite disadvantaged groups in particular in the course of the grant, to be identified by the stakeholders and individual town sites in the Leadership for Sustainable Communities Initiative, whereby some locations have very high poverty rates while others have very low poverty rates. Site / Location (11 Sites) Poverty Rate (National Average: 12.6%) Core Focus / Measures from Leadership for Sustainable Communities Initiative Ajo, AZ 28.1% Economic Development: Increase the Number of Business Developed, Attracted and/or Retained Bisbee, AZ 28.4% Economic Development: Increase the Number of Business Developed, Attracted and/or Retained Graham County, AZ 22.5% Economic Development: Increase the Number of Business Developed, Attracted and/or Retained Green Valley/Sahuarita, AZ 5.5% (average) Economic Development: Increase the Number of Business Developed, Attracted and/or Retained Climax Area, CO 13.3% Economic Development: Increased Accessible/Attainable Housing Clear Creek County, CO 7.45% Economic Development: Increased Accessible/Attainable Housing Grand County, CO 10.6% Economic Development: Increased Accessible/Attainable Housing Greenlee County, AZ 13.4% Economic Development: Increased Accessible/Attainable Housing Bagdad, AZ 3.23% Education and Workforce Development: Lifelong Education Globe-Miami, AZ 20% Education and Workforce Development: Increased Number of People Engaged to Promote Education Grant County, NM 21.5% Education and Workforce Development: Placement in Local Skilled Jobs

KR: Tap the talents of local environmental groups.

Local groups and local chapters of national organizations working on issues such as the environment, air quality and renewable energy can help cities address issues they may not be able to handle on their own. Collaborating with those groups adds knowledge and expertise to city policy discussions and aligning their programs with city initiatives can help ensure successful outcomes - and sharing costs is a bonus for both parties.

List the organizations representing sustainability you will invite (air quality, water quality, renewable energy, local chapters of national organizations, etc.) [1 Points]

Center for Food Security & Sustainability (Silver City, NM) ASU Julie Ann Wrigley Global Institute for Sustainability (Tempe, AZ) Southwest New Mexico Green Chamber of Commerce (Silver City, NM) National Center for Frontier Communities (Silver City, NM)

KR: Bring local businesses into the smart city conversation.

A city's large employers have a lot to offer the cities they operate in, and many realize they have "skin in the game." It's in their best interests to contribute to efforts to ensure quality of life, a growing economy and other opportunities for improving the urban environment.

List the large employers you will invite. [1 Points]

Freeport McMoRan, Inc. State of New Mexico

KR: Cities should partner with telecom providers..

Telecommunications companies can be great partners for cities. They provide valuable services cities require, but many are becoming increasingly involved in the smart cities space. That means they have a solid understanding of what cities need, how to ensure services are inclusive and scalable - and how those services can help a city be competitive.

List the telecommunications providers you will invite. [1 Points]

VWestern New Mexico Communications CenturyTel Verizon Telcel Other data/telecom providers and network support infrastructure providers including non-profit and for-profit providers will be discussed and considered within the consortium effort. These include but are not limited to: CENIC-DC, Cal-Ren HPR, Cogent, Level3, Google Caching, Netflix Caching, Internet2.

List the organizations representing local business you will invite (e.g. chamber of commerce, business improvement district, etc.) [1 Points]

SGreater Phoenix Economic Council Chambers of Commerce for: Town of Silver City City of Phoenix City of Albuquerque City of Las Cruces City of El Paso City of Tucson City of Tempe Southwest New Mexico Green Chamber of Commerce Technology HUB MX Juarez Future Forge (Silver City incubator hub/makerspace)

KR: The advantages of partnering with academic institutions.

Utilities and telecommunications companies have a lot to offer cities in a partnership. So do colleges and universities. In addition to a growing focus on STEM education which helps train tomorrow's smart city engineering and technology professionals, many academic institutions have partnered with cities to support innovative technology projects.

List the colleges and universities you will invite. [1 Points]

University of Arizona ITCH University of Colorado, Boulder University of New Mexico New Mexico Tech New Mexico State University University of Arizona New Mexico Highlands University

List the organizations representing education and/or teachers you will invite. [1 Points]

American Educational Research Association (AERA) New Mexico Public Education Department New Mexico Higher Education Department Arizona Department of Education Rural Education Resource Center - U.S. Department of Education National Rural Education Association

List the organizations representing health and health care you will invite (hospitals, doctors, nurses, etc.) [1 Points]

Southwest Center for Health Innovation Hidalgo Medical Services Gila Regional Hospital

List the regional authorities you will invite (transit, transportation, ports, airports, etc.) [1 Points]

New Mexico Department of Transportation (including aviation) Arizona Department of Transportation Texas Department of Transportation Secretaría de Comunicaciones y Transportes (SCT), State of Chihuahua, MX (See borderlands New Mexico-MX Chihuahua Border Master Plan in the supporting documents section)

List any state agencies or departments you will invite. [1 Points]

New Mexico Economic Development Department New Mexico Public Education Department New Mexico Higher Education Department Arizona Department of Education

List any federal agencies you will invite. [1 Points]

National Science Foundation U.S. Department of Education U.S. Department of Agriculture (USDA) including Rural Utilities Services (RUS) Conacyt (Mexico)

Section: Project Priorities

KR: Individual projects are part of an integrated plan.

Individual smart city projects are part of a larger, integrated plan. Those plans help city departments collaborate on projects when possible to reduce the likelihood of redundant work and, equally important, redundant investments.

Please make sure to choose three priority areas.

From the list below, choose three priority areas and then describe why they are priorities.

In the next section of the application, you will be asked to provide information about at least one project in each of the three priority areas you select. Your application will be evaluated based on your highest-scoring project in each of those priority areas.

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Buildings
- [ ] Digital City Services
- [x] Economic Development
- [x] Education and Workforce Development
- [ ] Emergency Response and Resilience
- [ ] Energy
- [ ] Environmental Services
- [ ] Health
- [ ] Human Services
- [ ] Payments
- [ ] Public Safety
- [ ] Sports, Culture, Leisure and Tourism
- [ ] Street Infrastructure
- [x] Transportation
- [ ] Waste Management
- [ ] Water and Wastewater
- [ ] Other

Click the line above to see your Priority Area choices.

Your Public Safety Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Public Safety Projects Projects

Your Economic Development Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

- Phoenix, AZ
- ASU/Tempe, AZ
- Chihuahua City, MX
- UTEP/El Paso
- Jozef Stefan Institute

Your Economic Development Projects Projects

Project: Phoenix, AZ

Expected project budget range [1 Points]

- Less than $1 million
- Between $1 million and $5 million
- ☑ Between $5 and $10 million
- Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

Who will the project affect and how will it benefit them? [2 Points]

Residents, job seekers, employers.

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Funding.

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility
- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

☐ Conventional procurement

- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [x] Operating contracts
- [ ] Public private partnership
- [ ] Privatization

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

Current project status [1 Points]

- [x] Underway
- Approved
- Planned
- Under consideration

Expected project start date [1 Points]

- Less than one-year
- One to three years
- [x] Four to seven years
- Seven to ten years
- More than ten years

Project scale [1 Points]

- Pilot project (confined deployment)
- District-wide deployment
- City-wide deployment
- [x] Regional deployment

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

Vital smart cities infrastructure needed to attract businesses and employers.

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Buildings
- [ ] Computer Hardware
- [ ] Computer Software

- [x] Data
- [ ] Field Equipment
- [ ] Streetlight or utility poles
- [ ] Streets/roadways/highways
- [ ] Telecommunications
- [x] Trained Personnel

Describe any efficiencies or cost savings made possible by the project.

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing
- [x] Project financing
- [ ] Revenue share financing
- [ ] Vendor financing

What problem or challenge will the project address? [2 Points]

Improved infrastructure needed to attract businesses.

Brief description [1 Points]

Phoenix, AZ The City of Phoenix seeks to create a ‘blueprint for a connected oasis’ and according to Stephenson a major component is the revamping Phoenix’s transportation network–including both surface transportation and public transit–to ensure the city is physically connected. The first step is to foster transit-oriented development by supporting compact, small block, mixed-use development near planned or existing light rail stations and by continuing the development of Central Avenue as the city’s transit spine and main street. The plan also calls for public infrastructure design to include pedestrian and bicycle amenities to create a walkable environment and increase residents’ activity levels. Phoenix transportation projects include: Expansion of light rail and high-capacity transit Expanding bus service to unserved arterial streets Extension of bus service hours and erecting shelters at all bus stops Repaving every surface road in the city Enhancing traffic operations centres Increasing accessibility for the disabled (ADA) and adding new sidewalks and bike lanes Providing Wi-Fi on buses and light rail cars Implementing real-time data for trip planning and reloadable transit fare cards Phoenix’s grid system was developed for the automobile and is being repurposed to support other transportation modes including public transit, bicycles and pedestrians. The plan embraces Complete Streets

philosophies, aimed to develop and implement ‘policies and professional practices that ensure streets are safe for people of all ages and abilities, balance the needs of different modes, and support local land uses, economies, cultures, and natural environments.’

Project: ASU/Tempe, AZ

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Funding. Construction delays.

Expected project budget range [1 Points]

- Less than $1 million
- Between $1 million and $5 million
- Between $5 and $10 million
- [x] Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

Brief description [1 Points]

The ASU Center for Smart Cities and Regions mission is to advance urban and regional innovation to make more inclusive, vibrant, resilient and sustainable communities. We collaborate with researchers, policy-makers, planners, entrepreneurs, industry and the public to enhance the ability of cities and regions to responsibly use emerging technological infrastructures and improve quality of life. “Smart technologies” and “big data” have rapidly emerged as hoped for solutions to many of the challenges cities and regions face. Yet, there is often a disconnect between the efforts of technology innovators and the local needs and context of policy-makers and communities. Leveraging resources from across ASU, CSCR bridges this gap between innovations in data and technologies and urban governance to develop anticipatory capacities and responsible innovation processes to create positive futures for cities, regions and their diverse communities.CSCR generates ideas, methods, scenarios, networks and spaces for collaboration, engagement, educational programs and other research products to enable our partners to leverage technological innovation to create the urban and regional futures they want. Futures Catalyst. To fully realize the potential of smarter cities and regions, governments need the skills to plan for, and actively manage, increasingly sophisticated technologies. To anticipate the effects and tradeoffs of the design choices of emerging technological infrastructures and have the deep understanding necessary to use them. CSCR works with local and regional governments to develop capacities to anticipate, design, experiment, iterate, and manage emerging technologies to meet public needs and implement specific actions. Initial Projects: Greater Phoenix Smart Region Initiative Governance of Autonomous Vehicles Equity and Engagement in the Smart City STIR Cities MacArthur Research Network for Opening Governance Community Nexus. CSCR works as a boundary organization to collaborate with publics, community groups and non-profits through public engagement and public science to foster the ability of communities to envision, articulate, and bring about the future they want. Initial Projects: Urban Resilience to Extremes Sustainability Research Network Arizona Education Modeling Opening Pathways for Discovery, Research, and Innovation in Health Extreme Heat Research Synthetic Empathy Educational Programs. CSCR has developed educational program offerings around smart and connected cities/regions in close collaboration with SFIS. Smart City Academy. The Smart City Academy will support individuals and organizations in their efforts to develop, implement and manage smart city endeavors effectively. Graduate Certificate in Policy Informatics. This certificate provides knowledge and skills for students seeking careers that will use informatics tools, models, and simulations to help individuals and groups deliberate and evaluate policy decisions as well as explore new governance infrastructures. Graduate Certificate in Policy Informatics. This certificate provides knowledge and skills for students seeking careers that will use informatics tools, models, and simulations to help individuals and groups deliberate and evaluate policy decisions as well as explore new governance infrastructures. Innovation Hub. The Center serves as a national and, potentially, international hub for discussions about the future of cities and regions, hosting events, meetings, and speakers.

Project scale [1 Points]

- Pilot project (confined deployment)

- District-wide deployment
- [x] City-wide deployment
- Regional deployment

What problem or challenge will the project address? [2 Points]

Need for commensurate infrastructure that anticipates smart cities and smart technology needs of businesses and employers.

Expected project start date [1 Points]

- Less than one-year
- One to three years
- [x] Four to seven years
- Seven to ten years
- More than ten years

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility
- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [x] Conventional procurement
- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [x] Operating contracts
- [x] Public private partnership
- [ ] Privatization

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

Current project status [1 Points]

- [x] Underway
- Approved
- Planned
- Under consideration

Describe any efficiencies or cost savings made possible by the project.

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing
- [x] Project financing
- [x] Revenue share financing
- [ ] Vendor financing

Who will the project affect and how will it benefit them? [2 Points]

Offers ASU and the City of Tempe critical technology infrastructure.

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Buildings
- [ ] Computer Hardware
- [ ] Computer Software
- [x] Data
- [ ] Field Equipment
- [ ] Streetlight or utility poles

- [x] Streets/roadways/highways
- [x] Telecommunications
- [x] Trained Personnel

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

Critical to the urban area and to ASU -- a very large institution and employer that can provide needed skills from students and labor.

Project: Chihuahua City, MX

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

Describe any efficiencies or cost savings made possible by the project.

Expected project budget range [1 Points]

- Less than $1 million
- Between $1 million and $5 million
- Between $5 and $10 million
- Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- [x] More than $500 million

Project scale [1 Points]

- Pilot project (confined deployment)
- District-wide deployment
- City-wide deployment
- [x] Regional deployment

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Policy, international trade agreements.

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility
- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [ ] Conventional procurement
- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [x] Operating contracts
- [ ] Public private partnership
- [ ] Privatization

Expected project start date [1 Points]

- Less than one-year
- One to three years
- [x] Four to seven years
- Seven to ten years
- More than ten years

Who will the project affect and how will it benefit them? [2 Points]

Urban residents.

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Buildings
- [ ] Computer Hardware
- [ ] Computer Software
- [x] Data
- [ ] Field Equipment
- [x] Streetlight or utility poles
- [x] Streets/roadways/highways
- [x] Telecommunications
- [x] Trained Personnel

Current project status [1 Points]

- [x] Underway
- Approved
- Planned
- Under consideration

Brief description [1 Points]

For the past three decades, Mexican cities have followed a “3D” growth pattern – new developments have been Distant, Disperse, and Disconnected – resulting in the fragmented and unplanned expansion of urban sprawl. This kind of sprawling urban development turns out to be highly unproductive, deepens inequality, raises pollution levels, and increases greenhouse gas emissions. Mexico's National Development Plan (PND), inaugurated in 2013, set forth six key reforms proposed by a coalition made up of EMBARQ Mexico, the Mexican Institute for Competitiveness (IMCO), and the Mario Molina Center for Strategic Studies of Energy and the Environment (CMM). These organizations united under the banner and Twitter hashtag #ReformaUrbana to push for the needed changes through an effective and large-scale social media campaign. The highlights the importance of implementing integrated urban transport systems, promoting bicycle and pedestrian mobility, and setting the rational use of the private car as national policy. Building on this, EMBARQ Mexico has proposed 100 Ideas for Urban Reform for the government, addressing specific actions and tactics for pursuing the goals laid out in the PND. These proposals are the result of massive public input (both in person and through Twitter), as well as guidance from experts.

What problem or challenge will the project address? [2 Points]

Need for infrastructure that results in clean air and an improved livability index.

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

High quality of life standards attract foreign employers (maquiladores) and skilled labor.

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing
- [x] Project financing
- [ ] Revenue share financing
- [ ] Vendor financing

Project: UTEP/El Paso

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing
- [x] Project financing
- [ ] Revenue share financing
- [ ] Vendor financing

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Buildings
- [ ] Computer Hardware
- [ ] Computer Software
- [x] Data
- [ ] Field Equipment
- [x] Streetlight or utility poles
- [x] Streets/roadways/highways
- [x] Telecommunications
- [x] Trained Personnel

Expected project budget range [1 Points]

- Less than $1 million
- Between $1 million and $5 million
- Between $5 and $10 million
- Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

Project scale [1 Points]

- Pilot project (confined deployment)
- District-wide deployment
- [x] City-wide deployment
- Regional deployment

Expected project start date [1 Points]

- Less than one-year
- One to three years
- [x] Four to seven years
- Seven to ten years
- More than ten years

What problem or challenge will the project address? [2 Points]

Improved sustainability and economic vibrancy.

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility
- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [x] Conventional procurement
- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [ ] Operating contracts
- [ ] Public private partnership

☐ Privatization

Current project status [1 Points]

☑ Underway
- Approved
- Planned
- Under consideration

Who will the project affect and how will it benefit them? [2 Points]

Residents of El Paso, UTEP graduates.

Describe any efficiencies or cost savings made possible by the project.

Brief description [1 Points]

Making cities “smarter” or transforming them into smart cities is the process of improving economic competitiveness and quality of life by implementing cyberinfrastructure technologies throughout a city. In an effort to launch a "smart city" research program at UTEP, UTEP researchers in civil engineering, electrical engineering, industrial, manufacturing and systems engineering, and computer science have formed a team with each member bringing a unique expertise in this area. The team is a collaboration with Dr. Victor Larios, Director of Smart Cities Innovation Center at Universidad de Guadalajara, Mexico, Dr. Miroslav Svitek, Dean of Faculty of Transportation Sciences at Czech Technical University, Czech Republic, Dr. Kaan Ozbay and Dr. Joe Chow at New York University, and Dr. Burcu Akinci and Dr. Mario Beges at Carnegie Mellon University. See: https://expertise.utep.edu/communities/smartcities

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

Vastly improves the urban environment and livability.

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Construction delays.

Economic growth.

Project: Jozef Stefan Institute

Describe any efficiencies or cost savings made possible by the project.

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

☐ Not applicable
☑ Buildings
☑ Computer Hardware

- [x] Computer Software
- [x] Data
- [x] Field Equipment
- [x] Streetlight or utility poles
- [x] Streets/roadways/highways
- [x] Telecommunications
- [x] Trained Personnel

Expected project budget range [1 Points]

- Less than $1 million
- Between $1 million and $5 million
- Between $5 and $10 million
- Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

Project scale [1 Points]

- Pilot project (confined deployment)
- District-wide deployment
- City-wide deployment
- [x] Regional deployment

Who will the project affect and how will it benefit them? [2 Points]

Rural communities everywhere; the rural communities of focus by JSI.

Current project status [1 Points]

- [x] Underway
- Approved
- Planned
- Under consideration

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Construction, economic growth, technology obsolescence.

Brief description [1 Points]

Slovenia has actively started implementing the Smart Specialization Strategy. Jožef Stefan Institute has applied for the coordination of the SRIP (Strategic Research & Innovation Partnership) for the Smart Cities and Communities topic. The Smart Cities and Communities partnership covers several verticals and the ICT horizontal. Industrial verticals include: Health Energy & Utilities Mobility, transport and logistics Security Urban Life Quality Smart City Ecosystem ICT horizontal covers the following topics: IoT IoS Cybersecurity HPC & Big data Digital transformation GIS-T The purpose of the partnership is to coordinate development resources of the stakeholders (companies and research organizations) in order to develop new products which will be successful on the global market. JSI also hosts the annual “Smart Towns” conference in Ljubljana, Slovenia that explicitly examines the role of smart technologies and connected networks as these relate to rural, small-town communities. JSI is an invaluable consulting partner as we ramp up to the full NSF proposal.

Expected project start date [1 Points]

- Less than one-year
- One to three years
- [x] Four to seven years
- Seven to ten years
- More than ten years

What problem or challenge will the project address? [2 Points]

The need for research on rural and small towns "smart technologies" needs.

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

For rural communities, the JSI efforts speak to this proposal and the needs of rural communities in the region defined.

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing
- [x] Project financing
- [ ] Revenue share financing
- [ ] Vendor financing

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility
- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [ ] Conventional procurement
- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [ ] Operating contracts
- [x] Public private partnership
- [x] Privatization

Your Buildings Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Buildings Projects Projects

Your Education and Workforce Development Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

- WNMU WF Dev
- Grant County WF Dev
- ASU WF Dev
- UTEP WF Dev
- Albuquerque WF Dev

Your Education and Workforce Development Projects Projects

Project: WNMU WF Dev

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Buildings
- [ ] Computer Hardware
- [ ] Computer Software
- [x] Data
- [ ] Field Equipment
- [ ] Streetlight or utility poles
- [ ] Streets/roadways/highways
- [ ] Telecommunications
- [x] Trained Personnel

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [x] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing
- [x] Project financing
- [ ] Revenue share financing
- [ ] Vendor financing

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility

- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [ ] Conventional procurement
- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [x] Operating contracts
- [x] Public private partnership
- [ ] Privatization

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

What problem or challenge will the project address? [2 Points]

Describe any efficiencies or cost savings made possible by the project.

Project scale [1 Points]

- Pilot project (confined deployment)
- District-wide deployment
- City-wide deployment
- [x] Regional deployment

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

Critical to employment and attracting employers.

Brief description [1 Points]

WNMU works with employers from the region to develop standards meeting respective employer needs.

Expected project start date [1 Points]

- Less than one-year
- One to three years
- Four to seven years
- Seven to ten years

- [x] More than ten years

Current project status [1 Points]

- [x] Underway
- Approved
- Planned
- Under consideration

Expected project budget range [1 Points]

- Less than $1 million
- [x] Between $1 million and $5 million
- Between $5 and $10 million
- Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

Who will the project affect and how will it benefit them? [2 Points]

Specific skillsets for industry -- specific certifications.

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Regulation, funding, technology/standards obsolescence.

Project: Grant County WF Dev

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [x] Not applicable
- [ ] Buildings
- [ ] Computer Hardware
- [ ] Computer Software
- [ ] Data
- [ ] Field Equipment
- [ ] Streetlight or utility poles
- [ ] Streets/roadways/highways
- [ ] Telecommunications
- [ ] Trained Personnel

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing
- [x] Project financing
- [ ] Revenue share financing
- [ ] Vendor financing

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility
- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [x] Conventional procurement
- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [ ] Operating contracts
- [ ] Public private partnership
- [ ] Privatization

Expected project start date [1 Points]

- Less than one-year
- One to three years
- Four to seven years

- Seven to ten years
- [x] More than ten years

Expected project budget range [1 Points]

- Less than $1 million
- Between $1 million and $5 million
- Between $5 and $10 million
- Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

Describe any efficiencies or cost savings made possible by the project.

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

Project scale [1 Points]

- Pilot project (confined deployment)
- District-wide deployment
- City-wide deployment
- [x] Regional deployment

What problem or challenge will the project address? [2 Points]

Skilled employees matching employer needs.

Brief description [1 Points]

Grant County: The Central Area Mid-Region Council of Governments (MRCOG) represents the counties of Sandoval, Bernalillo, Valencia, and Torrance. MRCOG provides planning services in the areas of transportation, agriculture, workforce development, employment growth, land use, water, and economic development. The Workforce Connection of Central New Mexico Business and Career Centers provide assistance to area employers while providing quality resources for people exploring career opportunities.

Current project status [1 Points]

- [x] Underway
- Approved
- Planned
- Under consideration

Who will the project affect and how will it benefit them? [2 Points]

General population.

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

Skilled employees attract employers.

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Regulation; economic growth.

Project: ASU WF Dev

Who will the project affect and how will it benefit them? [2 Points]

Improved organizational efficiencies and efficacies.

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Buildings
- [ ] Computer Hardware
- [ ] Computer Software
- [ ] Data
- [ ] Field Equipment
- [ ] Streetlight or utility poles
- [ ] Streets/roadways/highways
- [ ] Telecommunications
- [x] Trained Personnel

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility

- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [ ] Conventional procurement
- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [x] Operating contracts
- [ ] Public private partnership
- [ ] Privatization

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

What problem or challenge will the project address? [2 Points]

Need for updated employee skillsets.

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing
- [x] Project financing
- [ ] Revenue share financing
- [ ] Vendor financing

Describe any efficiencies or cost savings made possible by the project.

Expected project budget range [1 Points]

- Less than $1 million
- [x] Between $1 million and $5 million
- Between $5 and $10 million
- Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

Project scale [1 Points]

- [x] Pilot project (confined deployment)
- District-wide deployment
- City-wide deployment
- Regional deployment

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Funding (State of AZ).

Brief description [1 Points]

ASU: Every ASU employee is eligible for at least 16 hours of professional development training every year. The Leadership and Workforce Development group's programs for ASU employees cover topics that include Career Development, Effective Meetings-Presentations, Interpersonal Skills and Leadership Development.

Expected project start date [1 Points]

- Less than one-year
- One to three years
- Four to seven years
- Seven to ten years
- [x] More than ten years

Current project status [1 Points]

- [x] Underway
- Approved
- Planned
- Under consideration

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

Critical to ASU's competitiveness in higher education (efficiency and efficacy).

Project: UTEP WF Dev

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Buildings
- [ ] Computer Hardware
- [x] Computer Software
- [x] Data
- [ ] Field Equipment
- [ ] Streetlight or utility poles
- [ ] Streets/roadways/highways
- [ ] Telecommunications
- [x] Trained Personnel

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing
- [x] Project financing
- [ ] Revenue share financing
- [ ] Vendor financing

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an

item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility
- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [ ] Conventional procurement
- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [ ] Operating contracts
- [x] Public private partnership
- [ ] Privatization

Describe any efficiencies or cost savings made possible by the project.

Expected project budget range [1 Points]

- [x] Less than $1 million
- Between $1 million and $5 million
- Between $5 and $10 million
- Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

Expected project start date [1 Points]

- Less than one-year
- [x] One to three years
- Four to seven years
- Seven to ten years
- More than ten years

Brief description [1 Points]

UTEP: The U.S. Department of State, Partners of the Americas, and NAFSA: Association of International Educators on Oct 11 2017 announced The University of Texas at El Paso as one of the latest 100,000 Strong in the Americas Innovation Fund grant winners sponsored by Fundación Televisa.

What problem or challenge will the project address? [2 Points]

This program is a clear example of how our college is supporting the UTEP Edge initiatives by providing students with enriching experiences for lifelong success such as global awareness, teamwork, social responsibility, leadership, communication, problem solving, critical thinking as well as community engagement.

Who will the project affect and how will it benefit them? [2 Points]

Students and employers in El Paso and into Mexico.

Project scale [1 Points]

- [x] Pilot project (confined deployment)
- District-wide deployment
- City-wide deployment
- Regional deployment

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Funding.

Current project status [1 Points]

- [x] Underway
- Approved
- Planned
- Under consideration

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

There is a deep commitment by UTEP students toward building sustainable communities, and this award will enable them to partner with their counterparts in Mexico to arrive at robust approaches. Students in our engineering programs need specialized core skills, but they gain a competitive advantage when they leave with leadership and entrepreneurial qualities.

Project: Albuquerque WF Dev

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues

- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing
- [x] Project financing
- [ ] Revenue share financing
- [ ] Vendor financing

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility
- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [ ] Conventional procurement
- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [ ] Operating contracts
- [x] Public private partnership
- [ ] Privatization

Expected project budget range [1 Points]

- Less than $1 million
- [x] Between $1 million and $5 million
- Between $5 and $10 million
- Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

Brief description [1 Points]

UNM: The University of New Mexico continues to score well in national rankings, and Central New Mexico Community College is among the nation’s best community colleges. Both schools have been flexible and innovative in meeting the changing demands of employers. Both

institutions work with private industry and the national laboratories to improve education and training.

Expected project start date [1 Points]

- Less than one-year
- One to three years
- Four to seven years
- Seven to ten years
- [x] More than ten years

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

It is critical to have a skilled urban labor pool toward attracting employers.

Describe any efficiencies or cost savings made possible by the project.

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Buildings
- [ ] Computer Hardware
- [ ] Computer Software
- [x] Data
- [ ] Field Equipment
- [ ] Streetlight or utility poles
- [ ] Streets/roadways/highways
- [ ] Telecommunications
- [x] Trained Personnel

Who will the project affect and how will it benefit them? [2 Points]

Employers are assured of quality education and training opportunities in Albuquerque.

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

Project scale [1 Points]

- [x] Pilot project (confined deployment)
- District-wide deployment

- City-wide deployment
- Regional deployment

What problem or challenge will the project address? [2 Points]

Employers seek skilled, competent employees.

Current project status [1 Points]

- [x] Underway
- Approved
- Planned
- Under consideration

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Funding - State of NM.

Your Energy Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Energy Projects Projects

Your Environmental Services Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Environmental Services Projects Projects

Your Health Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Health Projects Projects

Your Human Services Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Human Services Projects Projects

Your Payments Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Payments Projects Projects

Your Sports, Culture, Leisure and Tourism Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Sports, Culture, Leisure and Tourism Projects Projects

Your Street Infrastructure Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Street Infrastructure Projects Projects

Your Transportation Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

- Tucson: UA researcher Dr. Larry Head will develop the Connected Vehicle Reference Implementation Architecture (CVRIA) and will support the essential services of data capture and distribution, and Connected Vehicle (CV) Map Management.

- Silver City has a local transit system, Corre Caminos, which offers riders bus service to nearby Deming and Lordsburg along I-10, and numerous locations in Grant County, including Silver City. There are three non-stop daily flights to Albuquerque Sunport, and one to Phoenix Sky Harbor Airport.

- Arizona: On August 25, 2015, the State of Arizona issued a proclamation 2015-09 allowing for the statewide testing and deployment of autonomous vehicles. Phoenix: A Systematically Managed ARTerial or SMART corridor is one where surface streets, are used at their maximum efficiency during normal periods of congestion and when an accident has occurred. The key component is intelligent transportation systems (ITS) technology, which is used to optimize corridor operations by balancing traffic flow between facilities. SMART corridor strategies have been applied in the region since the inception of the AZTech Model Deployment Initiative. The AZTech partners proposed and implemented 10 Smart Corridors in the region. The SMART corridor project installed Intelligent Transportation System (ITS) along the corridors, including the installation of vehicle detection systems (VDS), closed circuit television (CCTV) systems, dynamic message signs (DMS), and communications along the Smart Corridors. The corridors are located in City of Glendale, City of Peoria, City of Tempe, City of Scottsdale, City of Chandler, and the City of Mesa.

- El Paso: In addition to SmartMobility Texas which is a statewide effort to deploy autonomous vehicles efficiently and effectively, El Paso was one of two Texas cities selected by the Rockefeller Foundation to be part of the 100 Resilient Cities Initiative. The City is also pursuing opportunities to address local flooding issues and create affordable quality housing options. The initiative will cover areas such as traffic management, energy-smart grids, charging areas for electric vehicles, energy efficient lighting. Within the initiative, cutting-edge technologies will be applied in public services with the aim of enhancing their performance. The City will also establish partnership with El Paso Electric and businesses to install smart meters for tracking energy usage. The residents of El Paso will experience the substantial outcomes by 2020.

- Albuquerque: The City is in the process of instituting a new smartphone application that will allow riders to purchase their bus fares online, using a credit card and their smartphone. That same smartphone application will allow travelers to pay for their parking at City owned parking garages and on street parking with a credit card. This application, also, will be 100% PCI compliant. The phone application will store no personal information for the sake of security for the user. Albuquerque's vision is to enable its citizens to conduct business with the City through devices the user already has in his/her pocket, without fear of identity theft or credit mishap. For those individuals without use of a smartphone, the same confidence should apply to purchases made at City-owned vending machines selling bus passes. Any account associated with the smart phone application will be stored "in the cloud" by the smartphone application developer under strict security measures. It is resilient and guaranteed to be available 99.9% of the time. It is PCI compliant, which requires tokenization and encrypted servers. The vendor is PCI-DSS Level 1 PCI compliant.

Your Transportation Projects Projects

Project: Arizona: On August 25, 2015, the State of Arizona issued a proclamation 2015-09 allowing for the statewide testing and deployment of autonomous vehicles. Phoenix: A Systematically Managed ARTerial or SMART corridor is one where surface streets, are used at their maximum efficiency during normal periods of congestion and when an accident has occurred. The key component is intelligent transportation systems (ITS) technology, which is used to optimize corridor operations by balancing traffic flow between facilities. SMART corridor strategies have been applied in the region since the inception of the AZTech Model Deployment Initiative. The AZTech partners proposed and implemented 10 Smart Corridors in the region. The SMART corridor project installed Intelligent Transportation System (ITS) along the corridors, including the installation of vehicle detection systems (VDS), closed circuit television (CCTV) systems, dynamic message signs (DMS), and communications along the Smart Corridors. The corridors are located in City of Glendale, City of Peoria, City of Tempe, City of Scottsdale, City of Chandler, and the City of Mesa.

Project scale [1 Points]

- Pilot project (confined deployment)
- District-wide deployment
- ☑ City-wide deployment
- Regional deployment

Who will the project affect and how will it benefit them? [2 Points]

Traffic efficiency gains.

Expected project start date [1 Points]

- Less than one-year
- ☑ One to three years
- Four to seven years
- Seven to ten years
- More than ten years

What problem or challenge will the project address? [2 Points]

Traffic congestion/improving flows of traffic

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

Expected project budget range [1 Points]

- Less than $1 million
- [x] Between $1 million and $5 million
- Between $5 and $10 million
- Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

Describe any efficiencies or cost savings made possible by the project.

Current project status [1 Points]

- Underway
- [x] Approved
- Planned
- Under consideration

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing

- [x] Project financing
- [ ] Revenue share financing
- [x] Vendor financing

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility
- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [x] Conventional procurement
- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [ ] Operating contracts
- [x] Public private partnership
- [ ] Privatization

Brief description [1 Points]

Arizona: On August 25, 2015, the State of Arizona issued a proclamation 2015-09 allowing for the statewide testing and deployment of autonomous vehicles. Phoenix: A Systematically Managed ARTerial or SMART corridor is one where surface streets, are used at their maximum efficiency during normal periods of congestion and when an accident has occurred. The key component is intelligent transportation systems (ITS) technology, which is used to optimize corridor operations by balancing traffic flow between facilities. SMART corridor strategies have been applied in the region since the inception of the AZTech Model Deployment Initiative. The AZTech partners proposed and implemented 10 Smart Corridors in the region. The SMART corridor project installed Intelligent Transportation System (ITS) along the corridors, including the installation of vehicle detection systems (VDS), closed circuit television (CCTV) systems, dynamic message signs (DMS), and communications along the Smart Corridors. The corridors are located in City of Glendale, City of Peoria, City of Tempe, City of Scottsdale, City of Chandler, and the City of Mesa.

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [ ] Buildings
- [ ] Computer Hardware
- [ ] Computer Software
- [x] Data

- [ ] Field Equipment
- [ ] Streetlight or utility poles
- [ ] Streets/roadways/highways
- [ ] Telecommunications
- [ ] Trained Personnel

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

Improved urban mobility.

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Not applicable.

Project: El Paso: In addition to SmartMobility Texas which is a statewide effort to deploy autonomous vehicles efficiently and effectively, El Paso was one of two Texas cities selected by the Rockefeller Foundation to be part of the 100 Resilient Cities Initiative. The City is also pursuing opportunities to address local flooding issues and create affordable quality housing options. The initiative will cover areas such as traffic management, energy-smart grids, charging areas for electric vehicles, energy efficient lighting. Within the initiative, cutting-edge technologies will be applied in public services with the aim of enhancing their performance. The City will also establish partnership with El Paso Electric and businesses to install smart meters for tracking energy usage. The residents of El Paso will experience the substantial outcomes by 2020.

Project scale [1 Points]

- Pilot project (confined deployment)
- District-wide deployment
- [x] City-wide deployment
- Regional deployment

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Construction delays.

Expected project start date [1 Points]

- Less than one-year
- [x] One to three years
- Four to seven years
- Seven to ten years
- More than ten years

Describe any efficiencies or cost savings made possible by the project.

Improved traffic flows.

Expected project budget range [1 Points]

- Less than $1 million
- Between $1 million and $5 million
- [x] Between $5 and $10 million
- Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

Brief description [1 Points]

El Paso: In addition to SmartMobility Texas which is a statewide effort to deploy autonomous vehicles efficiently and effectively, El Paso was one of two Texas cities selected by the Rockefeller Foundation to be part of the 100 Resilient Cities Initiative. The City is also pursuing opportunities to address local flooding issues and create affordable quality housing options. The initiative will cover areas such as traffic management, energy-smart grids, charging areas for electric vehicles, energy efficient lighting. Within the initiative, cutting-edge technologies will be applied in public services with the aim of enhancing their performance. The City will also establish partnership with El Paso Electric and businesses to install smart meters for tracking energy usage. The residents of El Paso will experience the substantial outcomes by 2020.

What problem or challenge will the project address? [2 Points]

Improved mobilities for the public.

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [ ] Buildings
- [ ] Computer Hardware
- [ ] Computer Software
- [x] Data
- [ ] Field Equipment
- [ ] Streetlight or utility poles
- [ ] Streets/roadways/highways
- [ ] Telecommunications
- [ ] Trained Personnel

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [x] Consumption financing
- [ ] Equity financing
- [ ] Project financing
- [ ] Revenue share financing
- [ ] Vendor financing

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility
- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [x] Conventional procurement
- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [ ] Operating contracts
- [ ] Public private partnership
- [ ] Privatization

Who will the project affect and how will it benefit them? [2 Points]

Aging persons/disabled persons/children.

Current project status [1 Points]

- [x] Underway
- Approved
- Planned
- Under consideration

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

Faster access to airport and border crossings.

Project: Tucson: UA researcher Dr. Larry Head will develop the Connected Vehicle Reference Implementation Architecture (CVRIA) and will support the essential services of data capture and distribution, and Connected Vehicle (CV) Map Management.

What problem or challenge will the project address? [2 Points]

Improved data standards for transportation services.

Expected project budget range [1 Points]

- [x] Less than $1 million
- Between $1 million and $5 million
- Between $5 and $10 million
- Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility
- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [x] Conventional procurement
- [ ] Direct delivery

- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [ ] Operating contracts
- [ ] Public private partnership
- [ ] Privatization

Project scale [1 Points]

- Pilot project (confined deployment)
- District-wide deployment
- [x] City-wide deployment
- Regional deployment

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

Improved transportation to traverse the urban area including access to the airport and business development zones.

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

Current project status [1 Points]

- Underway
- Approved
- [x] Planned
- Under consideration

Expected project start date [1 Points]

- Less than one-year
- [x] One to three years
- Four to seven years
- Seven to ten years
- More than ten years

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.

- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [x] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing
- [x] Project financing
- [ ] Revenue share financing
- [ ] Vendor financing

Brief description [1 Points]

Tucson: UA researcher Dr. Larry Head will develop the Connected Vehicle Reference Implementation Architecture (CVRIA) and will support the essential services of data capture and distribution, and Connected Vehicle (CV) Map Management.

Who will the project affect and how will it benefit them? [2 Points]

Planners, residents.

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Buildings
- [ ] Computer Hardware
- [ ] Computer Software
- [x] Data
- [ ] Field Equipment
- [ ] Streetlight or utility poles
- [ ] Streets/roadways/highways
- [ ] Telecommunications
- [ ] Trained Personnel

Describe any efficiencies or cost savings made possible by the project.

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Construction delays, standards changes, policy.

Project: Albuquerque: The City is in the process of instituting a new smartphone application that will allow riders to purchase their bus fares online, using a credit card and their smartphone. That same smartphone application will allow travelers to pay for their parking at City owned parking garages and on street parking with a credit card. This application, also, will be 100% PCI compliant. The phone application will store no personal information for the sake of security for the user. Albuquerque's vision is to enable its citizens to conduct business with the City through devices the user already has in his/her pocket, without fear of identity theft or credit mishap. For those individuals without use of a smartphone, the same confidence should apply to purchases made at City-owned vending machines selling bus passes. Any account associated with the smart phone application will be stored "in the cloud" by the smartphone application developer under strict security measures. It is resilient and guaranteed to be available 99.9% of the time. It is PCI compliant, which requires tokenization and encrypted servers. The vendor is PCI-DSS Level 1 PCI compliant.

Project scale [1 Points]

- Pilot project (confined deployment)
- District-wide deployment
- [x] City-wide deployment
- Regional deployment

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

Expected project start date [1 Points]

- Less than one-year
- One to three years
- [x] Four to seven years
- Seven to ten years
- More than ten years

Expected project budget range [1 Points]

- Less than $1 million
- Between $1 million and $5 million
- Between $5 and $10 million
- [x] Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

What problem or challenge will the project address? [2 Points]

Traffic congestion. Lack of access to urban transit and airport.

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility
- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [ ] Conventional procurement
- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [x] Operating contracts
- [ ] Public private partnership
- [ ] Privatization

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [x] Not applicable
- [ ] Buildings
- [ ] Computer Hardware
- [ ] Computer Software
- [x] Data
- [ ] Field Equipment
- [ ] Streetlight or utility poles
- [ ] Streets/roadways/highways
- [ ] Telecommunications
- [ ] Trained Personnel

Describe any efficiencies or cost savings made possible by the project.

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an

item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing
- [x] Project financing
- [ ] Revenue share financing
- [ ] Vendor financing

Current project status [1 Points]

- [x] Underway
- Approved
- Planned
- Under consideration

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

Improved traffic flow. Access to mobilities without a motor vehicle.

Brief description [1 Points]

Albuquerque: The City is in the process of instituting a new smartphone application that will allow riders to purchase their bus fares online, using a credit card and their smartphone. That same smartphone application will allow travelers to pay for their parking at City owned parking garages and on street parking with a credit card. This application, also, will be 100% PCI compliant. The phone application will store no personal information for the sake of security for the user. Albuquerque's vision is to enable its citizens to conduct business with the City through devices the user already has in his/her pocket, without fear of identity theft or credit mishap. For those individuals without use of a smartphone, the same confidence should apply to purchases made at City-owned vending machines selling bus passes. Any account associated with the smart phone application will be stored "in the cloud" by the smartphone application developer under strict security measures. It is resilient and guaranteed to be available 99.9% of the time. It is PCI compliant, which requires tokenization and encrypted servers. The vendor is PCI-DSS Level 1 PCI compliant.

Who will the project affect and how will it benefit them? [2 Points]

All residents. Students and staff of UNM. Large employers.

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Construction delays.

Project: Silver City has a local transit system, Corre Caminos, which offers riders bus service to nearby Deming and Lordsburg along I-10, and numerous locations in Grant County, including Silver City. There are three non-stop daily flights to Albuquerque Sunport, and one to Phoenix Sky Harbor Airport.

Supporting File(s) [1 Points]

Please upload supporting documents. Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

Project scale [1 Points]

- Pilot project (confined deployment)
- District-wide deployment
- City-wide deployment
- ☑ Regional deployment

Expected project start date [1 Points]

- Less than one-year
- One to three years
- ☑ Four to seven years
- Seven to ten years
- More than ten years

Who will the project affect and how will it benefit them? [2 Points]

Non-motor vehicle owners; aging persons; families.

Expected project budget range [1 Points]

- Less than $1 million
- ☑ Between $1 million and $5 million
- Between $5 and $10 million
- Between $10 and $50 million
- Between $50 and $100 million
- Between $100 million and $500 million
- More than $500 million

Please briefly describe any ways in which the project may contribute to your economic growth. [1 Points]

Vastly improved mobilities for access to urban centers via seamless connections to airport.

What existing assets may be available for use by the project: [2 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [ ] Buildings
- [ ] Computer Hardware
- [ ] Computer Software
- [x] Data
- [ ] Field Equipment
- [ ] Streetlight or utility poles
- [x] Streets/roadways/highways
- [ ] Telecommunications
- [ ] Trained Personnel

Describe the project risks, including but not limited to technology obsolescence, policy and regulatory blockers, cash flow, and construction delays. [1 Points]

Construction delays, lack of funding.

Check each potential financing mechanism that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Traditional loans and leases.** Repayment can come from public funds, or third-party payments, or a combination.
- **As-a-service financing.** Rather than purchase technology, city consumes it as a service, thereby reducing or eliminating capital costs. Examples include but are not limited to street lights as a service, smart grid as a service, mobility as a service, etc.
- **Concession financing.** City gains revenues and/or reduces costs without paying for the project
- **Consumption financing.** Repayment based on usage.
- **Equity financing.** Raise funds by selling an ownership interest in an asset or service.
- **Project financing.** Assesses the financial viability of the individual project, not the city as a whole. Repayment comes all or in part from revenues generated by the project
- **Revenue share financing.** Repayment through a share of the revenues
- **Vendor financing.** From an equipment vendor or a project contractor.

- [ ] Traditional loans and leases
- [ ] As-a-service financing
- [ ] Concession financing
- [ ] Consumption financing
- [ ] Equity financing
- [ ] Project financing
- [x] Revenue share financing
- [x] Vendor financing

Describe any efficiencies or cost savings made possible by the project.

Current project status [1 Points]

- [x] Underway

- Approved

- Planned
- Under consideration

What problem or challenge will the project address? [2 Points]

Rural mobility barriers for residents.

Brief description [1 Points]

Silver City has a local transit system, Corre Caminos, which offers riders bus service to nearby Deming and Lordsburg along I-10, and numerous locations in Grant County, including Silver City. There are three non-stop daily flights to Albuquerque Sunport, and one to Phoenix Sky Harbor Airport.

Check each potential procurement option that your organization is willing to consider. [1 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- **Conventional procurement.** Public sector defines its requirements and procures them via traditional procurement methods
- **Direct delivery.** Public sector provides proprietary services directly to customers using public sector assets and staff (e.g. selling Internet access)
- **Franchising.** Agreement to operate government-owned assets to generate revenue streams
- **Licensing.** Perpetual license is a one-time, up-front expense funded from the CAPEX budget. Subscription license is ongoing payments funded from the OPEX budget
- **Long-term lease.**
- **Operating contracts.** Contract with private sector vendor to provide services
- **Public private partnership.** A long-term contract between a government and a private party for providing a public asset or service, in which the private party bears significant risk and management responsibility
- **Privatization.** Private sector becomes responsible for assets or services previously provided by the public sector

- [ ] Conventional procurement
- [ ] Direct delivery
- [ ] Franchising
- [ ] Licensing
- [ ] Long-term lease
- [ ] Operating contracts
- [x] Public private partnership
- [ ] Privatization

Your Waste Management Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Waste Management Projects Projects

Your Water and Wastewater Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only

the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Water and Wastewater Projects Projects

Your Other Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Other Projects Projects

Your Emergency Response and Resilience Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Emergency Response and Resilience Projects Projects

Your Digital City Services Projects

Click on the plus sign to add a project that relates to this priority area. You may add up to five projects. Each project will be evaluated, but only the highest-scoring project in each of your three priority areas will count toward your overall point total. You will be asked to provide a brief overview of these projects later in the application.

Your Digital City Services Projects Projects

Why is Environmental Services a priority area for you? [5 Points]

Why is Human Services a priority area for you? [5 Points]

Why is Public Safety a priority area for you? [5 Points]

Why is Buildings a priority area for you? [5 Points]

What other area is a priority area for you? [5 Points]

Why is Payments a priority area for you? [5 Points]

Why is Emergency Response and Resilience a priority area for you? [5 Points]

Why is Transportation a priority area for you? [5 Points]

Transportation including autonomous vehicles and possible advances in passenger drones are critical for rural communities. Often distances are far, and with an aging population, many are unable to drive a vehicle and existing transit infrastructure is sparse. It is precisely in this rural context that autonomous vehicles -- including passenger drones and transportation powered via solar power (a major economic development priority for the region) would be extremely effective and efficient compared to today's single car/truck model for a family or individual. Already we see innovations such as from Enterprise Car Rental (Enterpriserideshare.com) that allows organizations such as universities and the U.S. Border Patrol to lease on a monthly basis at a State of NM negotiated discount for easier ridesharing in an employment context. Ridesharing and carsharing opportunities combined with smart technologies, sensor technologies, and autonomous vehicle technologies are key to solving rural transportation and mobilities challenges. For rural communities along the border area that is sparsely populated and expansive, traveling to border crossings in El Paso, and along the border area is critical to labor mobility, student mobilities, faculty mobilities, and related. This ties directly into economic development, and education and workforce development -- including innovative forms of online, hybrid, and experiential learning designed to connect learners with experts and with social learning opportunities needed in specific contexts. Reaching out to Aptiv of Juarez (City of) near El Paso, this effort promises to advance the mobilities and transportation needs of families, individuals, students, employers, employees, and those who can offer maintenance support through appropriate certifications and competencies. This is a critical piece of the future for the region as defined in this grant.

Why is Waste Management a priority area for you? [5 Points]

Why is Economic Development a priority area for you? [5 Points]

Economic development is critical to rural communities everywhere in this region. For Grant County and Silver City, and the 10 other Leadership for Sustainable Communities Initiative sites, economic development stands at the center of all efforts in the transition away from extractive industries and mining. This is true too for rural communities in the State of Chihuahua, including Parral, Santa Barbara, and numerous small towns and cities that have depended on mining for over a century. This effort targets specifically these extremely challenged, low-income, isolated, remote, rural communities toward applying knowledge and data relating to advanced technologies (context aware, automated, sensor-based, internet of things, etc.). Identifying what works and does not based on data and carefully planned experiments based on data will go a long ways toward applying that knowledge and those trials to other rural communities that are not as economically, geographically, or socially challenged (in terms of social barriers to participation).

Why is Health a priority area for you? [5 Points]

Why is Education and Workforce Development a priority area for you? [5 Points]

Rural communities have long understood and comprehended the significance of economic decline. In the age of globalization, this decline has become more precipitous. To stem this tide, the grant consortium organizers fully recognize the importance of defining economic development strategies specifically designed for rural communities and regions. This is why, for example, Freeport McMoRan Inc. (FMI) collaborates with Arizona State University (ASU) and the ASU Lodestar Center for Philanthropy and Nonprofit Innovation toward supporting a regional strategy that enables current and former FMI mining towns in Arizona, New Mexico, and Colorado to define an economic development strategy unique to their population and context. Similarly, WNMU is committed to rural economic development and annually hosts rural economic development course in collaboration with the International Economic Development Council that is now in its 25th year of operation. Education and workforce development are inextricably linked for small towns and rural communities especially. WNMU along with numerous smaller colleges and institutions offer vocational education certifications ranging from drone maintenance to high-tech healthcare instrumentation to GIS. These skills and certifications are extremely relevant to youth seeking to enter the workforce, and for life-long learners who are updating their work and professional skills and competencies. For rural communities especially, education does not end with a degree. To the contrary, it is a lifelong effort to remain agile and well qualified for numerous different occupations. This effort will help enormously in sharing learning analytics, education resources, certification opportunities, and training resources across the entire region. The outcomes from this effort will reinforce and build upon existing education and workforce development efforts by improving the existing relationships across education institutions in the US and Mexico. Already the universities leading this effort, including WNMU, have a significant education presence and networks in Mexico. Currently WNMU offers certificates and degrees in construction technology, nursing, welding technology, electrical technology, and computer technology within its applied technology and workforce development program. This program currently provides students with jobs in wind energy, smart technology for the home, drone and related maintenance and programming, programmable logic controllers for drones and machine tool manufacturing technologies including Festo HVAC systems, and is expanding its programs. The same strategy of certified maintenance for IoT, smart technology, autonomous vehicle technologies, and sensor technologies will be executed and applied to this effort

and data findings about rural community needs and the deployment of smart technologies therein. This is a fundamentally different strategy than design and development, as is the focus for larger research universities and urban-based businesses with more resources. It is an appropriate match for our rural context and this effort is critical to realizing its full potential as a strategic effort to improve workforce development in harmony with economic development that is industry-based and whereby competencies, standards, and certifications are industry determined.

Why is Digital City Services a priority area for you? [5 Points]

Why is Energy a priority area for you? [5 Points]

Why is Water and Wastewater a priority area for you? [5 Points]

Why is Sports, Culture, Leisure and Tourism a priority area for you? [5 Points]

Why is Street Infrastructure a priority area for you? [5 Points]

What are your long-term goals for making progress in is other area? [5 Points]

What are your long-term goals for making progress in the Digital City Services area? [5 Points]

What are your long-term goals for making progress in the Energy area? [5 Points]

What are your long-term goals for making progress in the Buildings area? [5 Points]

What are your long-term goals for making progress in the Sports, Culture, Leisure and Tourism area? [5 Points]

What are your long-term goals for making progress in the Public Safety area? [5 Points]

What are your long-term goals for making progress in the Payments area? [5 Points]

What are your long-term goals for making progress in the Economic Development area? [5 Points]

The Education & Healthcare and Natural Resources & Mining industries have been the most important drivers of economic growth in Grant County, accounting for 62% of all new jobs and 40% of all new businesses created. Western New Mexico University (WNMU) and Gila Regional Medical Center are the Education & Healthcare industry's largest employers with 722 and 700 employees, respectively. Other major Education & Healthcare employers are Silver Consolidated Schools (418 employees) and the Cobre School District (219 employees). Freeport-McMoran is the Natural Resources and Mining industry's largest employer with 1,400 employees. Grant County is located in a prime location for solar and geothermal energy production. Located in the sun belt, New Mexico is one of the top solar emitting states in the U.S., and southern New Mexico is particularly strong in solar-energy potential. Grant County Strengths - Education and Workforce Development: Western New Mexico University is a four-year university with a community-college capacity. WNMU has a strong nursing program. Large population of retirees. Educational attainment levels are much higher than in the past decades. Distance/online learning at WNMU. Proximity to New Mexico State University (NMSU) in Las Cruces, which is a major research university. Commercial daily air transportation from Albuquerque and the Phoenix. Entrepreneurship and Small Business Development: Strong local banks. Local business people are highly entrepreneurial and resourceful. International Business Accelerator, affiliated with WNMU. Presence of a local Small Business Development Center Vibrant arts and culture community. Business Climate – Retention, Expansion, and Recruitment: Rich mineral deposits with growing employment

opportunities. Workers are willing to drive long distances to work. Self-sufficient local economy. Strong community healthcare system. County-operated public transportation system. Competitive operating and labor costs. Strong growth in business establishments. Sites and Infrastructure: Generally high-quality, well-maintained state and county highways and local road system. Land is a tremendous asset. A three-county system for public transportation. An ongoing theater district development plan. There is a strong residential rental market. Direct daily commercial air transportation from the Grant County Airport to Albuquerque and Phoenix. Quality of Life: Rich historical and cultural environment. Strong community health care system. Abundant hunting and fishing. Incredible scenic beauty and vistas. Low crime rate. Outdoor recreation opportunities valued by young professionals (especially, hiking, biking and walking trails). Vibrant arts and cultural district. Moderate cost of living Extremely pleasing moderate year-round climate Gila National Forest REGIONAL CONNECTIONS - Many workers travel across county and state lines to their places of employment. Evidence of intertwined regional economies is revealed by an analysis of Grant County's labor shed – the counties where Grant County workers live – and the commute shed - the counties where Grant County residents work. Grant County is not an isolated economy, but rather acts as a player in a broader regional economy with important linkages, including a shared labor pool, a multi-county university system, and strong partnerships between regional employers and educators. Data provided by the U.S. Census Bureau shows that many people in Grant County and surrounding counties travel long distances to work. Sixteen percent of Grant County's workers drive more than 50 miles to their places of employment. As a result, Grant County should not just see itself as a lone county but as a part of a larger regional economy. Regional cooperation in any area is a major component to success in economic development. Regions, not individual cities or counties, are the locus of competitive advantage in the new economy –an economy where human capital plays a much more important role in company and community prosperity.

What are your long-term goals for making progress in the Health area? [5 Points]

What are your long-term goals for making progress in the Waste Management area? [5 Points]

What are your long-term goals for making progress in the Education and Workforce Development area? [5 Points]

Our long-term goals for improving Education and Workforce Development: Develop and design the blueprint and strategic plan for an overarching model that connects education to different careers such that the education is relevant to learners seeking a career track. This strategic plan to be based on existing data from the region and the specific satellite towns and urban centers. Offer specific competency-based certifications across the region through the network of higher learning institutions in it, and dual enrollment programs for high-school students that provide pathways to a career. Offer an array of education modes to meet the needs of learners, from fully online to fully face-to-face, to hybrid and "cohort" models of learning that address both access to education issues and the need for social learning for many learners in the region, anchored in a relevant curriculum. Develop regional standards for vocational education, professional degrees, and healthcare certifications and degrees. Offer technical, healthcare, data related, software coding, and business related certifications that closely match employer and manufacturing needs in the region, including the U.S. and Mexico. Develop cross-border opportunities for short-term (time-bounded) job opportunities for U.S. and Mexican labor. Define a regional program to improve the language skills of instructors (teachers and faculty) and develop their abilities to effectively instruct different profiles of learners and their respective cultural and social orientations. This is part of a larger biliteracies effort that develops writing and reading in Spanish and English within specific industry and professional contexts, in addition to verbal language skills.

What are your long-term goals for making progress in the Transportation area? [5 Points]

A seamless mobility network of end-to-end transportation that operates on demand or near-on-demand for communities and the population across the region in a way that employs minimal resources. Such a mobility network operates on the basis of data sharing across providers and consumers, and is less resource intensive than today's model of one or more car/vehicle/truck owned per family which usually involves significant debt together with insurance, fuel, and maintenance costs that comprise the second largest and sometimes the largest annual expenditures per family household. Mobilities in the future can be seen as "transportation as service" whereby travelers can move across vast spaces much more efficiently and within much less time allotments, including to urban destinations needed often for employment, business, education, and more.

What are your long-term goals for making progress in the Emergency Response and Resilience area? [5 Points]

What are your long-term goals for making progress in the Environmental Services area? [5 Points]

What are your long-term goals for making progress in the Street Infrastructure area? [5 Points]

What are your long-term goals for making progress in the Human Services area? [5 Points]

What are your long-term goals for making progress in the Water and Wastewater area? [5 Points]

Which, if any, of the following does your long-term vision address for this other area? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Which, if any, of the following does your long-term vision address for Environmental Services? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Which, if any, of the following does your long-term vision address for Health? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Which, if any, of the following does your long-term vision address for Economic Development? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Economic development
- [ ] Social equity
- [x] Digital equity
- [x] Resilience
- [ ] Sustainability
- [x] Efficiency
- [ ] Citizen engagement
- [ ] Safety
- [ ] Public Health

Which, if any, of the following does your long-term vision address for Payments? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Which, if any, of the following does your long-term vision address for Energy? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Which, if any, of the following does your long-term vision address for Sports, Culture, Leisure and [5 Points]

Tourism? Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Which, if any, of the following does your long-term vision address for Digital City Services? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Which, if any, of the following does your long-term vision address for Emergency Response and Resilience? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Which, if any, of the following does your long-term vision address for Water and Wastewater? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Which, if any, of the following does your long-term vision address for Education and Workforce Development? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Economic development
- [x] Social equity
- [x] Digital equity
- [ ] Resilience
- [x] Sustainability
- [ ] Efficiency
- [ ] Citizen engagement
- [ ] Safety
- [ ] Public Health

Which, if any, of the following does your long-term vision address for Human Services? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Which, if any, of the following does your long-term vision address for Public Safety? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Which, if any, of the following does your long-term vision address for Transportation? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

- [ ] Not applicable
- [x] Economic development
- [x] Social equity
- [ ] Digital equity

- [ ] Resilience
- [x] Sustainability
- [x] Efficiency
- [x] Citizen engagement
- [ ] Safety
- [ ] Public Health

Which, if any, of the following does your long-term vision address for Waste Management? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Which, if any, of the following does your long-term vision address for Buildings? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Which, if any, of the following does your long-term vision address for Street Infrastructure? [5 Points]

Please click in the area below to add an option to your list. You can click additional items and add all options that apply. Use the 'x' to delete an item from your list.

Briefly describe your efforts to date and their results in this other area? [5 Points]

Briefly describe your efforts to date and their results in the area of Transportation. [5 Points]

At this time, only urban centers in this region defined are planning and enjoying the benefits of “smart transportation” or “smart mobilities.” For smaller towns, not only is it essential that residents can move efficiently, economically, and within reasonable time constraints; but it is essential that urbanized towns with significant motor-vehicle traffic design spaces and places for walking and biking. These non-motor-vehicle affordances are critical to attracting retirees who seek safe areas to walk and bicycle, and are part of the attraction towns such as Silver City that has a vibrant mountain biking community, and hosts the annual Tour of the Gila bicycle road race for over 25 years. It will be critical to tie in the expert researchers on this effort including from UTEP, ASU, and UACH who are experts in engineering design for transportation. Together with the social sciences experts on this proposal who understand the role of mobilities for livelihood, social justice, education, and more; the technology experts (and there are quite a few on this effort) can apply specific technological solutions to this critical, universal rural challenge of mobilities technologies and data connections.

Briefly describe your efforts to date and their results in the area of Economic Development. [5 Points]

Efforts have been uneven across the multi-state and MX region defined herein. For Grant County, economic development efforts are in progress and there is a significant increase in community engagement including a new incubator/business startup space (Future Forge), increased WNMU success including the #1 ranked teacher education program in the State of New Mexico, a specially funded State of New Mexico PED collaborative project between WNMU and Aldo Leopold Charter School that investigates and draws conclusions about private industry channels between local high schools, WNMU, and employers (2019 program recently launched), and WNMU has over 50 Mexico university student, faculty, research, and articulation agreements and memoranda of understandings. This includes a dual degree from UACH partner of Chihuahua City in undergraduate business administration and undergraduate chemistry. These agreements also coincide with biliteracies efforts in the WNMU School of Education (recently ranked #1 in teacher education by NMPED, and highly ranked in childhood and special education) and across the curriculum.

Briefly describe your efforts to date and their results in the area of Street Infrastructure. [5 Points]

Briefly describe your efforts to date and their results in the area of Waste Management. [5 Points]

Briefly describe your efforts to date and their results in the area of Public Safety. [5 Points]

Briefly describe your efforts to date and their results in the area of Environmental Services. [5 Points]

Briefly describe your efforts to date and their results in the area of Education and Workforce Development. [5 Points]

Different efforts are underway in 2019 that bode well for the region's efforts to connect education with workforce development: WNMU is working with international mining company Freeport-McMoRan on a mission to prepare welders for work in Grant County's Chino and Tyrone mines. The mining company's New Mexico operations donated $10,000 to the university's community and workforce development department to buy training equipment and supplies for the welding program. WNMU has begun introducing new processes into the existing welding program and may in the future be able to offer continuing education courses for those already in the industry. Officials say the goal is to prepare students for employment with Freeport's copper mining operations in southwestern New Mexico so they can be hired without leaving the community they are rooted in. On January 7, 2019 Aldo Leopold Charter School (ALCS) in collaboration with WNMU was awarded a $60,000 Work Based Learning Initiative (WBLI) grant from the Public Education Department to support and develop Career Technology Education programming in the southwest region of the state by strengthening a consortium of industry leaders and secondary and post-secondary learning institutions. They will consult with Western New Mexico University and area industries to determine how to prepare students for further post-secondary vocational and technical training or job placement upon completion of high school education. The award is anticipated to renew for two additional years. Numerous success stories of education and workforce development exist in the urban center locations partnering in this effort. These include ASU and ASU Online and their 2014-launched partnership with Starbucks to support employees seeking an advanced degree. The partnership has proven to be successful, and this effort hopes to focus on online learning needs of aspiring rural learners seeking employment locally or remotely, including urban areas and Mexico. Experts on this consortium including Jaime Casap of Google and Otto Khera of WNMU, and specific persons at UTEP, are committed to improving learning opportunities through innovative, technology-based models. Smart technologies offer an entirely new way of connecting learners, instructors, and industry.

Briefly describe your efforts to date and their results in the area of Energy. [5 Points]

Briefly describe your efforts to date and their results in the area of Human Services. [5 Points]

Briefly describe your efforts to date and their results in the area of Payments. [5 Points]

Briefly describe your efforts to date and their results in the area of Health. [5 Points]

Briefly describe your efforts to date and their results in the area of Digital City Services. [5 Points]

Briefly describe your efforts to date and their results in the area of Water and Waste Water. [5 Points]

Briefly describe your efforts to date and their results in the area of Sports, Culture, Leisure and Tourism. [5 Points]

Briefly describe your efforts to date and their results in the area of Emergency Response and Resilience. [5 Points]

Briefly describe your efforts to date and their results in the area of Buildings [5 Points]

Section: Smart City Plans and Progress

Smart City Plans and Progress Instructions Instructions

- This section provides a quick overview of your past, current, and planned smart city projects. Please provide a name and a summary paragraph for each project.
- This section will not be scored, but it will provide important context for the judges. There are no wrong or right answers in this section. Applicants will NOT be graded on their progress to date, only on their ambitions for the future.
- Questions labeled with a red * are required questions.
- Use the arrows at the top of the page and the [next] and [back] buttons at the bottom of the page to navigate to the different pages of the section.

I have completed some smart city projects in the last two years?

- (•) Yes
- ( ) No

Please list the smart city projects completed in the last two years.

PPhoenix, AZ The City of Phoenix seeks to create a ‘blueprint for a connected oasis’ and according to Stephenson a major component is the revamping Phoenix’s transportation network–including both surface transportation and public transit–to ensure the city is physically connected. The first step is to foster transit-oriented development by supporting compact, small block, mixed-use development near planned or existing light rail stations and by continuing the development of Central Avenue as the city’s transit spine and main street. The plan also calls for public infrastructure design to include pedestrian and bicycle amenities to create a walkable environment and increase residents’ activity levels. Phoenix transportation projects include: Expansion of light rail and high-capacity transit Expanding bus service to unserved arterial streets Extension of bus service hours and erecting shelters at all bus stops Repaving every surface road in the city Enhancing traffic operations centres Increasing accessibility for the disabled (ADA) and adding new sidewalks and bike lanes Providing Wi-Fi on buses and light rail cars Implementing real-time data for trip planning and reloadable transit fare cards Phoenix’s grid system was developed for the automobile and is being repurposed to support other transportation modes including public transit, bicycles and pedestrians. The plan embraces Complete Streets philosophies, aimed to develop and implement ‘policies and professional practices that ensure streets are safe for people of all ages and abilities, balance the needs of different modes, and support local land uses, economies, cultures, and natural environments.’

I have smart city projects underway but not yet complete?

- ( ) Yes
- (•) No

I have smart city projects approved but not yet underway?

- ( ) Yes
- (•) No

I have smart city projects planned but not yet approved?

- ( ) Yes
- (•) No

I have smart city projects under consideration, but not yet approved or planned?

- ○ Yes
- ◉ No

I have infrastructure projects approved but not yet underway (telecommunications, roads, highways, bridges, airport expansions, stadiums)?

- ○ Yes
- ◉ No

I have large developments approved but not yet underway (neighborhoods, large apartments or condos, housing, re-development)?

- ○ Yes
- ◉ No

Section: Statements, Confirmations and Attachments

Statements, Confirmations and Attachments Section Instructions

- This section will help the judges better understand what the Smart Cities Readiness Challenge means to you and your community. It's also where you can share letters of support from stakeholders who would assist in making your Smart Cities Readiness Program a success.
- This section will be scored. If you look at each question you will see a number In the top right corner of the question if there is a point value for that question.
- Questions labeled with a red * are required questions.
- Use the arrows at the top of the page and the [next] and [back] buttons at the bottom of the page to navigate to the different pages of the section.

Why did you enter the Readiness Challenge? [5 Points]

The Readiness Challenge would help rural communities in our region spanning from Arizona, to New Mexico, Texas, and into Chihuahua, Mexico adequately prepare for a common, collaborative application to the National Science Foundation (NSF) for a 2020 "Smart & Connected Communities" major federal grant in combination with Conacyt institutional support from Mexico. Data and strategic planning for a smart and connected rural communities region would be invaluable to similar rural initiatives that seek to improve their overarching prospects through data sharing, context-aware technologies, and the incipient Internet of Things (IoT). As the popular name "smart cities" indicates, the sensor and context-aware technologies that comprise IoT are focused nearly exclusively upon addressing urban challenges rather than rural ones. In the age of globalization, rural communities are experiencing significant population and economic decline in addition to lower quality and levels of resources and services associated with digital communications, healthcare, education, transportation, and more (Adamy & Overberg, 2017; Cromartie, 2017). This narrative of decline is the overarching narrative heard by youth and associated with their educational experiences and curriculum (Corbett, 2017). Rural youth in particular are leaving their communities for other opportunities and are often at a disadvantage as they enter their careers especially in the domain of technological literacies and knowledge. Our goal as a Smart Cities Council Readiness Challenge applicant (consortium) is to address the lack of focus, solutions, and research regarding rural communities and rural contexts as these relate to smart technologies and data integration. We seek to define prospective and universal data-driven solutions that can guide rural communities as they seek to effectively and methodically apply IoT toward addressing their overarching and universal rural economic, education, healthcare, and population decline. Such an effort requires a consortial effort that spans different contexts including cultural and linguistic ones. Among the most disadvantaged areas are the United States borderlands of Mexico in the Southwest, aka, "colonias," with New Mexico as one of the poorest, lowest performing state in the union. Therefore, we seek a consortial effort that brings together research universities (UACH, ASU, UTEP), our rural, teaching and learning college and university (WNMU), an expert partner with explicit experience in the formation of "smart towns and smart regions" (JSI), a mining company with towns representing a broad region in the Southwest including Arizona, New Mexico, and Colorado (FMI); and various expert industry partners with specific technological capabilities and data expertise relevant to this effort and to employers in the regions and towns covered. Additionally, we are including various rural economic development and healthcare-related partners (National Frontier Communities, Southwest Center for Health Innovation, Center for Food Security & Sustainability). Finally, we seek to formally include the major urban centers in this effort if we are successful with this grant proposal: Phoenix, AZ; Phoenix, AZ; El Paso, TX; Albuquerque, NM; Las Cruces, MX; Ciudad Juarez, MX; Chihuahua City, MX; and Parral, MX. We may also seek to include state-level supporting agencies This planning grant is designed to prepare for a full National Science Foundation (NSF) grant specifically relating to smart communities: https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505364

Are you authorized to submit this application on behalf of your organization?

- (•) Yes
- ( ) No

I would like to upload a letter of support from your organization's top executive?

I can earn [5 Points] if I upload a document.

- (•) Yes
- ( ) No

Please upload a letter of support from your organization's top executive. [5 Points]

Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Uploaded file(s):

- NMEDD_LOS_WNMU_Smart_Tech_letter_signed_by_Secretary_Designate_Keyes__1_.pdf

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

In the event your organization wins the competition, are you prepared to supply venue, food, audio-visual, and other event expenses, either directly or by securing contributions?

- (•) Yes
- ( ) No

What would winning mean for your community? [5 Points]

Receiving this award would be extremely significant for all of the communities on this grant proposal, and especially the rural communities such as Silver City, New Mexico. It means that we can shift the thinking from one of decline to one of aspirations. The narrative forthcoming from planning a smart communities region focused on rural community needs is critical at this time to all of the rural communities on this grant, but also the many rural communities in the US, Mexico, and beyond. Bringing together the consortium members would immediately signal to each participating community the relevance of IoT and “smart and connected communities” in a rural context. It would alert rural communities everywhere that there are benefits to data integration and sharing across a region, and offers a rural-urban nexus that has not been fully explicated to date. If only to change the thinking from one of decline to one of innovation and possibilities, this effort and a win for our rural borderlands communities will be extremely powerful and positive. It will make all the difference in the world. Winning this grant would connect us and the 10 other Leadership for Sustainable Communities Initiative sites to major urban areas with far greater resources that can be applied in a structured, organized, and facilitated way. This relationship is intended to be supported over a long term through other external funding sources including the National Science Foundation, Conacyt of MX, and other federal, state, and private funding sources ranging from grants, to investments, to startups.

I would like to upload a letter of support from a utility, agency or similar organization relevant to one or more of your priority projects?

I can earn [5 Points] if I upload a document.

- (•) Yes
- ( ) No

What is the total population of the Applicant and all supporting local governments?

- No Greater than 10,000
- 10,001 to 25,000
- 25,001 to 50,000
- 50,001 to 100,000
- 100,001 to 150,000
- 150,001 to 200,000
- 200,001 to 350,000
- 350,001 to 500,000

- 500,001 to 750,000
- 750,001 to 900,000
- 900,001 to 1,500,000
- [x] Greater than 1,500,001

What will you do with the help provided? [5 Points]

The formal support structure and consultancy from Smart Cities Council provides the needed framework that brings together the partners on a regular basis, both online (synchronous and asynchronous) and face-to-face. With the expert input from Smart Cities Council facilitators together with experts from the respective participating collaborators, we will apply the help directly to a 2020 National Science Foundation grant proposal focused on a smart and connected region that emphasizes the needs of rural communities, and that emphasizes an international or global collaboration that aligns with education needs generally and higher education student mobilities and the connection to rural economic development. This help will make a rural-urban nexus possible beyond the initial planning efforts and well into the future.

Please upload a letter of support from a utility, agency or similar organization relevant to one or more of your priority projects. [5 Points]

Please upload a DOC,

DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

How will you factor vulnerable and underserved populations into your smart city program? [5 Points]

The region in the US associated with this proposal -- focused on the FMI Leadership in Sustainable Communities rural communities in the Southwest -- and the State of Chihuahua and towns in that region are all underserved and vulnerable. Most of the rural learners in this region are eligible for subsidized school lunch programs, and our populations are highly diverse with up to 50% bilingual learners. This effort will help plug in the diverse population toward gaining an authentic sense of what is possible with IoT and shared data networks, and the collaboration with Mexico will reinforce the identity of bilingual community members and their families. This effort is as much about the social needs and cultural identity of communities in this region, as it is about the actual technologies, data framework, and technological affordances associated with our proposed effort to design a smart and connected rural-urban, regional, cross-border network of towns and cities. There at least two immediate and palpable benefits to the communities associated with this effort should we be successful in receiving this award, and moving to the next step and receiving an NSF award in 2020: Improved broadband and data connectivity, and improved mobilities relating to that shared data. Indeed, a major challenge for rural communities is the need to have access to others, especially people in urban centers, and the ability to travel long distances efficiently. Indeed, rural communities depend upon ubiquitous broadband access toward attracting entrepreneurs, families, business startups, and economic development; and for a myriad of social needs ranging from education to healthcare to food security.

I would like to upload a letter Letter of support from a college or university?

I can earn [4 Points] if I upload a document.

- (•) Yes
- ( ) No

Please upload a letter of support from a college or university. [4 Points]

Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Uploaded file(s):

- ASU_Letter_of_Support_-_SCC__Final___1_.pdf
- Letter_of_Support_Smart_Cities_Council__1_.pdf
- GG_Nunez_Mchiri_UTEP_Department_of_Sociology_and_Anthropology_letter_of_Support___1_.pdf
- Escanear_2__2_.pdf

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

What else should judges know when considering your application? [5 Points]

While we fully understand that we do not have the level of advanced planning of other applicants representing a single urban center, we seek to make the appeal that this grant would enable us -- the respective consortium members -- to define the granular level of needs and commensurate technologies that support the data-driven solutions that address rural community and regional needs. If we were to receive this grant and the support of Smart Cities Council experts, we would provide groundbreaking data and knowledge that no other effort to date has produced nor sought to produce. This appeal goes far beyond urban centers and offers an opportunity to really make a difference for those who most need it: rural communities and the borderland region with Mexico. The bottom-line reason: we are extremely passionate and committed to this effort, and have on board the critical mass and expertise to do something that will leapfrog rural communities such as ours and others into the 21st Century and our oncoming internet of things/smart technologies reality. We will succeed if funded.

Why should they choose this application over others? [5 Points]

The institutions and members of the consortium are committed to this effort beyond other applicants who are often/mostly/exclusively in urban centers. There is little to no research and discussion of IoT and related context-aware technology applications for rural towns, communities, and regions. This effort will be the first such effort in North America to carefully and methodically examine, record, and analyze the needs of rural communities in a region -- a cross-border region at that -- toward developing a full and formal collaborative effort to connect the region with smart technologies and services. This effort will shed light on badly needed data and overarching knowledge relating to rural needs for advanced technologies, and will help define innovative ways to offer education that addresses workforce development needs and in turn, economic development. Underlying education and economic development is need for improved mobilities. Again, this grant will help shed significant light on the innovative ways that mobilities can be improved to be more efficient and effective in specifically rural contexts where distances are greater and populations are much sparser and smaller.

I would like to upload a letter Letter of support from a chamber of commerce or business improvement district? I can earn [4 Points] if I upload a document.

- (•) Yes
- ( ) No

Please upload a letter of support from a chamber of commerce or business improvement district. [4 Points]

Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Uploaded file(s):

- NCFC_LOS_WNMU_Smart_Cities_Council__1_.pdf
- Letter_of_Support_WNMU__1___1_.pdf
- Letter_of_Support_Jan_2019__1_.pdf

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

The Council seeks to make a lasting difference. Should you win, please discuss how you would continue your smart city efforts after the conclusion of the Readiness Program. [5 Points]

We see this as merely the beginning of a much longer, sustainable haul for the participating stakeholders. All of the member institutions relating to the effort will seek to apply as a consortium to a 2020 NSF Smart & Connected Communities major grant spanning 60 months. We would be working directly with the Jozef Stefan Institute (JSI) and presenting at their annual “Smart Towns” conference in Ljubljana, Slovenia (an EU member state). Researchers

from the larger research institutions (UACH, ASU) will continue to collaborate on data findings toward publishing these in peer-reviewed research journals and for presentation at numerous IoT and “smart communities” conferences and symposia. This effort will draw much national and international attention at a time when there is much focus on the plight of rural communities such as the ones who are in the region described in this proposal. This attention is needed toward awakening rural residents and leaders to the opportunities associated with “smart technologies” and helping to define and design rural-urban networks and the shared data and data-related, technological needs of these rural communities. If successful, this grant would be transformative for decades to come and will serve as the first and foundational effort to formally address the needs of rural communities in a rural, isolated context. This is a fundamental need that is going unanswered.

I would like to upload a letter Letter of support from a neighboring city or regional association?

I can earn [4 Points] if I upload a document.

- (•) Yes
- ( ) No

Please upload a letter of support from a neighboring city or regional association. [4 Points]

Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Uploaded file(s):

- 2019_Letter_of_Support_WNMU_Grant_Proposal.pdf
- Letter_of_Support_WNMU__1___1_.pdf

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

I would like to upload a letter of support?

I can earn [3 Points] if I upload a document.

For cities: A letter of support from your county. For counties: A letter of support from at least one city in your jurisdiction. For states: A letter of support from at least one city or county in your jurisdiction. For regional authorities, ports, districts, and private developments: A letter of support from a significant entity in your region, such as a city or county.

- (•) Yes
- ( ) No

Please upload a letter of support. [3 Points]

For cities: A letter of support from your county. **For counties**: A letter of support from at least one city in your jurisdiction. **For states**: A letter of support from at least one city or county in your jurisdiction. **For regional authorities, ports, districts, and private developments**: A letter of support from a significant entity in your region, such as a city or county.

Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 4

Uploaded file(s):

- scan0071__1___1_.pdf
- doc_1___1_.pdf
- WNMUSmartCities2019__1_.pdf
- WNMU-Letter_of_Support__1_.pdf

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 4

I would like to upload something else: Other, including background documents, RFIs, smart city plans, etc?

I can earn [4 Points] if I upload a document.

- (•) Yes
- ( ) No

Please upload a something else: Other, including background documents, RFIs, smart city plans, etc. [5 Points]

Describe and upload each document separately.

Please upload a DOC, DOCX or PDF File. Maximum size: 50Mb. Maximum number of files: 10

Uploaded file(s):

- StakeholderCVs.pdf

Maximum upload file size: 50MB

Allowed Extensions: pdf,doc,docx

Maximum uploaded files is: 10

End of Application

This is the end of the application. If you feel you have completed the application and uploaded all required files you can go to the top of the page and click the orange SUBMIT APPLICATION button located on the top right

WARNING: Please make sure to check everything twice before you submit this application. Once you have submitted your application you can not make any changes or updates.